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ROMAN AGRICULTURE.

Nearly all the recent investigations undertaken for the purpose of developing the principles of Agriculture, have demonstrated the important fact that those practices which are founded on the careful observations of practical farmers, are eminently judicious. This fact, while it has damped somewhat the ardor of those who anticipated a revolution in agriculture from the introduction of special manures founded on the analyses of plants and soils, has stimulated more cautious inquirers to study the opinions of practical men, not only of the present, but of the past. Hence it is that the agriculture of the ancient Romans is now receiving so much attention from some of the best British agricultural writers. From the similarity of our climate, this subject is even more worthy the attention of the farmers of this country than of those of England. We have, in the old books on Roman agriculture, a vast storehouse of observed facts, which, when examined by the light of modern science, not only suggests many subjects of great interest to the student of agricultural phenomena, but may enable us to deduce principles which will lead to an improvement in our present practices.

The most complete treatise on Roman agriculture was written by Columella, who flourished A. D. 42. It consists of thirteen books, one of which is in verse. This author gives practical directions for draining the land, both by open and covered drains. The covered drains, he says, should be three feet deep, half filled with small stones or clean gravel, the earth that was dug out being thrown over them. If neither stones nor gravel can be obtained, he advises that twigs should be twisted like a rope, and formed to the exact thickness of the bottom of the drain, and then that cypress or pine leaves should be pressed down upon it, taking care that at both ends of the drain two stones should be placed upright like pillars, having another laid over their top, to support the bank, and give a free ingress and egress to the water.

Plowing.—The Roman agricultural writers invariably represent plowing as the most important operation of agriculture. Cato observes that if asked what is the first point in good husbandry, he should answer, *good* plowing; what the second—plowing of *any* kind; what the third—manuring: thus indicating the subordinate place he would assign to the latter. This was at an early period of Roman history, when the land retained, probably, much of its original fertility. In the time of Columella, manuring was considered more essential; but even this writer evidently considered plowing one of the most important operations on the farm, and his directions must be admitted to be very practical and judicious. The land was never to be plowed when wet; in order completely to pulverize the soil, cross-plowing was to be resorted to; the furrows were to be narrow and close, so that all roots and weeds might be destroyed; and the surface left so equal that few or no traces of the plow could be perceived. Particular care was to be taken by the plowman, not to make an unequal furrow—one varying in breadth and depth; and when the ridges were thrown up, they were to be perfectly straight. So much were these two points insisted on, that they gave rise to the primary meaning of two words which are now in common use in a figurative sense. To plow with an irregular furrow (*vario sulco*) was to *prevaricate*—a term afterwards transferred to a witness in the law courts who deviated from the truth. The ridge thrown up by the plow was called *lira;* and if that was formed irregularly, the plowman was said *delirare*—a term which, under the form of *delirious* we now use to signify only mental aberration. We hope our right-minded and truthful readers will not act so inconsistently in their plowing operations as to merit, in its etymological sense, the title of *delirious prevaricators.*

Subsoiling appears to have been unknown, but the land was sometimes plowed nine inches deep, and generally three or four times in the course of

the season. VIRGIL recommends plowing a fallow for wheat twice in cold and four times in warm weather. There was indeed no limit to the number of plowings, hoeings, etc., the object being, according to THEOPHRASTUS, "to let the earth feel the cold of winter and the sun of summer, to invert the soil, and render it free, light, and clean of weeds, so that it can most easily afford nourishment."

SOWING THE SEED.—On wet soils, the seed was deposited in ridges, the soil being thrown up either with a plow with two mold-boards, or by two turns of one with a single mold-board, *after the seed had been scattered.* On dry ground, on the contrary, the land was first ridged, and the seed then sown in the intervening furrows. Modern seed-drills were unknown, but this method of sowing in ridges accomplished the same object, enabling the farmers to hand-hoe their crops, which they did repeatedly. The question of thick and thin sowing was discussed by the Romans as much as at the present time. COLUMELLA seems to be in favor of thin sowing in rich and loose soils, because the plants tiller, and thus become more productive. From two to two and a quarter bushels of seed wheat per acre was about the average quantity sown. Less was sown on light than on heavy soils.

The selection of the finest and most healthy seeds was a matter of much attention. VARRO affirms that wheat preserves its vitality for 50 years, millet for 100 years, and beans for 120 years.

ROTATION OF CROPS appears to have been little practiced—the land being renovated by means of fallow—though VIRGIL says "the land will *rest* [that is, will remain in as good condition as if it had been fallowed,] by a change of crop."

The Roman writers are almost unanimous in recommending to cut wheat before the grain is fully ripe, and COLUMELLA declares that it will ripen after it is cut. PLINY observes that wheat cut when fully ripe gives the greatest quantity of flour, but that reaped early has a finer and plumper berry. It was a maxim, "better to reap two days too soon than two days too late."

Horses were seldom if ever used in cultivating the soil, oxen being employed for this purpose. Much attention was given to breeding and training them, and they appear to have been treated with great kindness. In breeding, the form of the cow was considered of more importance than that of the bull. The cows which COLUMELLA most approved were of "a tall make, long, with very large belly, very broad head, eyes black and open, horns graceful, smooth, and black, hairy ears, straight jaws, very large dewlap and tail, and moderate hoofs and legs." The bulls, PALLADIUS says, "should be tall, with huge members; of a middle age, rather young than old; of a stern countenance; small horns, a brawny and vast neck, and a confined belly."

"To break bullocks," says VARRO, "put their necks between forked stakes; set up one for each bullock, and give them meat from the hand; they will become tractable in a few days. Then, in order that by degrees they may become accustomed to the yoke, let an unbroken one be joined with a veteran, whom he will imitate; then let them go upon even ground without a plow, then yoked to a light plow in sandy soil."

"Calves," says VIRGIL, "which you intend for country labor, should be instructed while their youthful minds are tractable, and their age manageable. First bend round their necks wide wreaths of tender twigs; then, when their free necks have become accustomed to servitude, put real collars upon them, join bullocks of equal strength, and make them step together. At first, let them frequently be employed in drawing along the ground wheels without any carriage upon them, so that they may print their steps only upon the top of the dust. Afterward, let the beechen axle groan under the heavy load, and the pole draw the wheels joined to the weighty carriage."

"The plowman," says COLUMELLA, "when he has unyoked his oxen, must rub them after they are tied up, press their backs with his hands, pull up their hides, and not suffer them to stick to their bodies, for this is a disease that is very destructive to working cattle. No food must be given them till they have ceased from sweating and high breathing, and then by degrees, in portions as eaten; and afterwards they are to be led to the water, and encouraged by whistling." Encouraging the horse to drink, etc., by whistling, is still a common practice in many parts of England. How few know that it was recommended by a learned author nearly 2000 years ago!

LEGUMINOUS PLANTS—SAINFOIN.

THE fact that wheat, and probably other plants of the order Ceralia, when allowed to go to seed, require more ammonia for their growth than the crop contains when grown, while beans, peas, tares, and clover—all leguminous plants—though they contain a much greater quantity of nitrogen (ammonia) than the cereals, are less dependent on a supply of ammonia in the soil, indicates that leguminous plants deserve much more attention from American farmers than they have yet received.

Sainfoin is a leguminous plant possessing many qualities which render it worthy of cultivation on

FLOWERS AND LEAF OF SAINFOIN.

all soils and situations favorable to its production. Its composition is very similar to that of red clover, and it forms excellent hay, beside affording much wholesome and substantial pasture. Before the introduction of turnip-culture, it was the main-stay of the stock-keeper on the chalk hills of Wiltshire and other parts of England; and even now its qualities as a renovator of the soil are so much esteemed that a clause is inserted in many leases, compelling the tenant to leave a certain quantity of the land seeded with sainfoin. In France, and other European countries, it is highly esteemed. It succeeds best on sandy soils abounding in lime. It will not flourish on clays. It may be sown instead of clover, and in the same way, about four bushels of seed being required per acre.

We annex a cut of the plant, and should be glad to hear from any of our readers who may have given it a trial.

THE SHROPSHIRE-DOWN SHEEP.

A few years ago, the Shropshire-Down sheep were comparatively unknown in England. The Royal Agricultural Society, at its last exhibition, offered prizes for the "best short-wooled sheep, not South-Downs," and this offer had the effect of bringing the Shropshire-Downs to the notice of the public. Three of the four prizes offered for rams in this class were taken by Shropshire-Downs; and they are now not only recognized as a distinct breed, but justly regarded as one of great value.

The exact origin of this breed is unknown. The common sheep of Shropshire, like those of other parts of England, are of a very mixed character. They have been extensively crossed with the Ryeland, a fine-wooled, small, compact, well-formed sheep, which has existed as a distinct breed from time immemorial, and which appears to have been indigenous to a tract of sandy land on the borders of Wales celebrated for the growth of *rye*, and hence the name of the breed. It has been, for some years, the practice of many good farmers in Shropshire, to cross their common breeding sheep alternately with Leicester and South-Down rams, under the impression that if their flocks partook too largely of either the one or the other of these breeds, they were not so good for breeding purposes or for the butcher. As might be expected, sheep bred in this manner were of very unequal character—some were very inferior, while others, for size and symmetry, were excelled by no breed in the kingdom. By selecting the best ewes, and crossing them continuously with South-Down rams, a flock possessing more distinct characteristics would be soon obtained, which, by judicious breeding for a number of years, would in the end become a fixed breed. That this is the true origin of the Shropshire-Downs, we have little doubt. Though of recent origin, they possess considerable fixity of character, and are an undoubted *breed*—as much so as the Hampshire or New Oxfordshire Downs.

The Shropshire-Downs are not so coarse as the Hampshire, and at the same age not quite as large, though considerably larger than the Sussex-Downs. They are hardier than either, and will fatten on poorer food. They will average 20 lbs. per quarter, dressed, at 18 months old, when fed on nothing but turnips and a little straw. We have known a flock of Hampshire-Down wethers to exceed this weight at twelve months old, but they were fed on highly nutritious and expensive food—viz: clover hay, oil-cake, and ruta bagas; and it is quite probable that, for a "high-pressure" system of feeding, the Hampshire are better than the Shropshire-Downs,

SHROPSHIRE-DOWN WETHER.

though for ordinary farm management, the latter are in our opinion the better breed.

We annex an engraving of one of three prize Shropshire-Down wethers, bred by and the property of HENRY SMITH, JR., of Sutton Maddock, near Shiffnal, England, which received the first prize, with a breeder's silver medal, at the late Birmingham Cattle Show. The *Mark Lane Express* describes these sheep as admirable for splendid quality of meat, broad chines and full plaits, and wonderfully good loins and rumps.

THE HESSIAN FLY.

EDITORS GENESEE FARMER:—C. G. DICK, of Highland county, Ohio, asks "if pasturing wheat, which was attacked last autumn by the Hessian fly, with sheep through the winter or early spring, will be likely to destroy the fly?"

"There are," says Dr. FITCH, "two generations of this insect annually. The eggs resemble minute reddish grains, and are laid in the creases of the upper surface of the leaf, when the wheat is but a few inches high, mostly in the month of September. These hatch in about a week, and the worm crawls down the sheath of the leaf to its base, just below the surface of the ground, where it remains subsisting upon the juices of the plant, without wounding it, but causing it to turn yellow and die." Here it remains, undergoing several changes, until the next May, when the fly is hatched, lays its eggs for another generation, and soon perishes. These eggs produce the brood which attack the wheat in autumn.

It will be seen that "grazing through the winter" will be of little or no benefit. If it had been attended to at the time the eggs were laid, and before they were hatched, most of them would have been destroyed. Perhaps it will be of some avail to graze the wheat closely at the time the second brood appears, or to roll it down with a heavy roller. There is no means of making the wheat grow again, which has already been destroyed. A fertile soil and late sowing are recommended as preventives of its ravages, combined with the precautions spoken of above. Where the wheat midge, also, is to be feared, little wheat can be grown. J. H. B.

SUGGESTED ITEMS.—No. 18.

NOT quite a week—yet it seemed long to wait—after the 1st of the month, came the February number of the *Farmer*. It is a cold, snowy day, when I sit down to itemize—just such a day as we have been asking for, and for many of them, ever since winter began. We want snow and sleighing to get up our year's wood on—to get our crops to market, left unsold last autumn—to go a-visiting, etc., etc.—and "an open winter" is not generally coveted by the farmer. Yet he, if anybody, can "make the best of it," and ought not to grumble about the weather.

"*Natural and Artificial Drainage*" are capitally illustrated in your first article. The last figure shows how stiff clays become friable, after a year or two, if thoroughly drained, as we have seen it exemplified in more than one instance.

"*Three-Horse Whiffle-Trees*," like that shown in the first figure, are in common use among us. The "evener" is made of a tough piece of ash, with holes bored in each end, and one-third distant from one end, so as to put on common clevises,—requiring a double whiffle-tree complete, three extra clevises, and an extra single whiffle-tree, to fit out a "rig" for a three-horse team.

"*Growth of Potatoes*."—S. W. thinks the yield of potatoes gradually diminishing in Western New York. Of course, he has some theory to account for it. Will he tell us what it is? How long has this diminution been going on?

"*Sheep and Sheep-Ticks*" seem well understood by your correspondent, JOHN JOHNSTON. The sheep on our farm have never been troubled with ticks since we began to feed them separate from the cattle, in good racks, under dry, well-littered sheds; and they have raised more and better lambs, too. I believe that it *pays* to feed and shelter stock of all kinds, and am glad to see it advocated so ably, by one who "has been long in the way," and whose experience is so prized by your readers.

"*Fattening Cattle in Winter*," if one has a good barn cellar, may be done upon pumpkins. We put eight wagon-loads of our best pumpkins into the cellar, and piled up a dozen loads more in a sheltered place, covering them with straw, and they did good service in feeding milch cows and fattening beef, this open winter. Toward the last, our beef was fed on cut hay and barley meal; and many who saw it, thought better was seldom seen, dead or alive. A good many farmers had more pumpkins wasted, last fall, than would have sufficed to nearly fatten two or three head of cattle.

"*Analyses of Soils*."—Your "Out West" correspondent has a practical idea of the value of soil-analyses—it is true that experiments with crops will best determine the fertility of a soil.

"*Variety of Grass Seeds*" should be sown, as W. B. argues. But why "except hogs" from finding good, cheap food, at pasture. Clover, especially, is much liked by swine, and they will grow well upon it—though other food should be supplied in addition, to hurry their growing a little.

"*Profits of Fruit Culture*." "Our orchard has brought us more money, this year, than the remainder of the farm," is the language of many a farmer. Other products have been low and very dull of sale. Apples have sold pretty well. B.

Niagara Co., N. Y., Feb'y, 1853.

NOTES FOR THE MONTH.—BY S. W.

Soil-Analyses and Dr. Lee.—It is pleasant to read an article, now and then, from the now far off Dr. Daniel Lee, once the efficient editor of the young *Genesee Farmer*—a man who did so much, in the dark day of our agricultural literature, to lift up the mind of the farmer from the slough of hereditary prejudice and hoary error. If, like the learned Liebig, it is his fault sometimes to make experiment bend to theory, he can at least boast of being in very respectable company. But Dr. Lee ingenuously admits that his early notions of the reliability of soil-analyses have been modified by his own experiments. That part of Dr. Lee's article, in the last *Farmer*, which interested me most, is his remarks on Mr. Wells' analyses of some of the semper-fertile soils of the Scioto bottoms. As the Dr. pertinently remarks, "Mr. Wells tells us how much water, hygrometric and combined, the soils contain, and the amount of waxy and resinous matter; but we learn *nothing of the quantity of nitrogenous elements* that may be present in any form"—a serious omission, which can only be palliated by the fact of the utter inutility of soil-analyses!

I confess that my faith was a little shaken in Mr. Wells' solution of the causes of the lasting fertility of the soil of the Ree Ree bottom, which he ascribes to the "fineness of the mineral particles, and to the amount and condition of their original organic matter." It appeared to me that their enduring fertility was due, in part at least, to the large quantity of animal fœces and ligneous matter annually left on and turned into the soil. The large stalks of the Dent corn, being inedible, are rarely removed from the field. After the largest ears are plucked and carted out of the field, cattle and hogs are turned in; the hogs glean the nubbins, and the cattle break down the tall and ponderous stalks to devour their leaves. I have seen several plows driven at one time in a large field on a Miami bottom, in the month of April, and the field appeared, in the distance, to be thickly strewn with monstrous corn stalks. These, after being plowed in, must, on decomposition, give to the soil that absorptive power which no mechanical condition of the mineral particles could alone give, beside supplying it with that ammonia and carbonic acid which the atmosphere does not supply for a maximum crop.

Monetary Panic and Revulsion.—Two years ago, in the fastest and largest city of the western lakes, a resident of some pretensions was heard to boast that said city was "bound to rival New York." His prediction, then laughed at, is already verified, and that great town now beats New York in her career of depreciated currency, in the collapse of business, fall in rents and the prices of real estate, and all the other ills that such a city might be supposed to be heir to, when the great bubble of the credit system had exploded! But the city of New York, and every other commercial or manufacturing town, is benefited by the revulsion. It is the only panacea for the inflated state of our banking, railroad, and commercial systems, and the consequent moral corruption and the diseased effeminacy of the domestic circle! Self-denial, retrenchment, and reform, never take place in times of monetary inflation and ostensible pecuniary prosperity; like "patience, they are 'plants of a bitter growth,' but they bear a sweet fruit."

The Troubles of another Great Western City.—From the new cities of the Upper Mississippi Valley, we continue to hear the most stirring accounts of the revulsion in the times, the poverty and insolvency of the outside country, and the total absence of the circulating medium, with the exception of a meagre issue of new but irresponsible paper promises. Even that boasting young city near the head of the valley, whose name stands as a parody on that of the great apostle to the Gentiles, boasts now only of its own infirmities—a late but precious moral experience! But, to show up one of the most crying evils that the late monetary expansion has brought in, I will merely advert to a few of the details of a printed report, I have just received, of a committee appointed by the tax-payers of Milwaukee, to ferret out the extent of official profligacy and covert doings of the municipal governors of that city. It appears, on the Mayor's own showing, that he has received but $161,763.07 as the net proceeds of sales of $220,000 of the city bonds. Other bonds were issued, from day to day, some of them not even countersigned by either the treasurer or comptroller, and for "the most ordinary objects of expenditure." When money costs so great a sacrifice of promises to pay, one would have thought that the city fathers would have been the more economical of its use; but the reverse was the case. A site for an engine house was bought for $10,000, and a new engine for $2,500. Five thousand dollars were voted by them to purchase school furniture, chandeliers and other decorations, while the old furniture was almost thrown away. Seven thousand dollars were paid for bridge repairs alone, and the Alderman who was chairman of the bridge committee made out the contractor's bill himself, and certified the same; thus assuming the anomalous office of creditor and auditor! It is also asserted, in the report, that the contract for paving a street where an Alderman resided and held real estate, was made at fifty cents the yard; while, in the streets of tax-payers, contracts were given at $1.70 per yard. But these are only a few of the items contained in a report of sixteen pages. The total amount of the city tax is $688,498.28—more than twice as large, says the report, as the whole State tax of Wisconsin! The salaries of Mayor, city officers, and Aldermen, with the wages of their subordinates, alone amount to $70,000—nearly seven-eighths the amount of *the whole tax of Detroit*, a city of more real wealth and a larger population! It is said that no city on the face of the globe was ever so heavily taxed, Sacramento in golden California not excepted. But the astounding disclosures made by the committee, have induced the Legislature of Wisconsin to suspend the collection of the tax until June next, and to grant an injunction to stop the sale of city bonds by the present municipality.

The present state of collapsed trade all over the Union, is proof that the ultimate point of folly and recklessness in the affairs of men, has been reached, and that a certain return to a sound and healthy state is now in progress.

Ticks on Sheep.—Had I not seen the name of John Johnston at the end of a communication with the above title, in the last *Farmer*, I should have passed it without reading; but as the canny Scot never fails to be both interesting and instructive, I read on until I found that Mr. J.'s great specific

for sheep ticks is food and shelter, so as to make the sheep comfortable to themselves and profitable to their master. Methinks no farmer, after reading Mr. JOHNSTON'S pertinent remarks, will be so lost to shame and ridicule as to inquire in print, over his own name, "what is the best remedy against sheep ticks." Here, also, Mr. J. details at length his management of sheep and lambs; how he buys lean ones in the fall, and sells them fat in the spring at from $7.25 to $8.00 each. The manure made by the same animals reveals a part of the secret why Mr. J. grows large crops of white wheat, while almost every other farmer gets only a small crop of the poor Mediterranean variety.

WHAT SHALL WE PLANT?

AT this time, to many farmers in Western New York and elsewhere this is a perplexing question. Nearly everything in the way of crops has become uncertain and unsettled, by reason of depreciation in the market value, or the uncertain yield of some, and the very material injury to the wheat crop by the ravages of the weevil.

I think it is safe to predict that wheat will not prove a certain or profitable crop for some years to come, wherever the weevil has made its appearance, as there is no reason to suppose its stay will be brief. As long as the wheat crop furnishes annual food for the swarms of insects of this family, so long may farmers expect to be visited by them. I doubt not they may be less severe some years, or in some particular locality, than in others; but that they will continue to prey upon the wheat crop, seems a fixed fact. And, what is worse, they continue, like the "star of empire," to travel westward. Passing through New York and Canada, the farmers of Ohio, Michigan, and other western wheat-raising States, may prepare for their destructive visits. Many years may intervene before these distant points may be reached, but it is the part of wisdom to apprehend and prepare for the scourge, that it may be measurably averted. I do not now propose to offer any suggestions upon the destruction or dispersion of the weevil. One thing is certain: wherever the weevil has fairly made its appearance, it will not be advantageous to sow wheat as a main crop. This has been done too long already. It has been one of the vital errors of American farming, as I view it, that they have in the different localities made some one crop a specialty, to the almost entire exclusion of every other. As a natural consequence, whenever that crop has either failed from any cause or has not commanded the expected price, the farmer has for that year found his expectations far from being realized; and probably the result has been, leaving him with no surplus, if not really in debt. This has been, and will continue to be, the result where the main business of the farm has been devoted to growing only one crop, whether it be wheat, corn, beans, stock, or the dairy business.

The first and most rational answer, therefore, to the question with which I began, would be, "Plant a diversified crop." While it may be sound common sense, and good farming economy, to devote a large part of the land under tillage to some one crop, common prudence and a cursory knowledge of the laws of demand and supply will strongly urge the necessity of planting different fields to different crops, that if one fails or does not command the requisite price, another may, and thus enable the husbandman to reap a fair reward for his toil.

Agricultural chemists and editors assert that a crop of wheat, or any other crop, takes from the soil in which it is grown certain elements—constituents of the growing and perfected grain; but that different crops—as corn, clover, barley, millet, and others—take up *different proportions* of these constituents. It would seem, therefore, to be a matter of necessity, having in view the good of the land, that every farmer should pursue a mixed husbandry; and as a consequence, plant or sow in rotation by some regular course, as to let clover follow wheat, corn after clover, and barley or some root crop after corn, to be succeeded again by wheat and clover or grass, and then to meadow and pasture. I do not propose to indicate a course, but only the good sound sense of a rotation and some reasons why it should be pursued.

I have no doubt that the dilemma in which too many farmers now find themselves—poor crops and nothing to sell—would have been more than half averted at the outset, had it been their practice to diversify their crops so as to have enabled them to realize a profit on one if the others failed. There is too much risk—too much at stake—to jeopard the use of the farm and the expense of its cultivation upon the success or failure of a single grain crop; and, sooner or later, those who do this will experience the bitter fruits thereof, as thousands in Western New York are now doing.

In the best farming districts of Europe, where the land is under rental, experience has taught the necessity, as it has shown the wisdom, of a four or six course system; not only as it regards the annual profits of the farm, but also as the more surely preserving and indeed improving the fertility and consequent productiveness of the soil. It is essentially an improved system of agriculture, and one to which the wheat-growers of New York, as well as the corn-producers of the great West, can not too soon adopt. Of this, more at length hereafter.

MORE "NOTIONS" ON FODDERING.

EDITORS GENESEE FARMER:—Since I communicated my "Notions" for the February number, we have had some "snug winter weather," just such as makes it a pleasure to feed cattle and sheep, *just to see them eat.* They are not so particular, in such weather, about *what or when;* just give them fodder, and they are ready to pick it up.

The oat chaff and bean straw are about gone. I have not given any of the latter to the old sheep for some time. They have not done quite as well, and I was "calculating" what to do about it, when the *Farmer* came, with JOHN JOHNSTON'S ideas on sheep-keeping. I read that, and began with a peck of oats per day (to forty sheep), to help them on a little. "Seems as though" I could not afford to increase to more than half a bushel; but that will do them some good, with what hay they can eat.

My lambs are doing well, and I mean to keep them in growing order—even if they must have grain once a day—as much as the old sheep. I had rather have, for sheep-feeding, a ton of good bean straw—especially if not threshed entirely clean—than the best ton of hay that was cut last season. J. H. B.

A FEW WORDS ON MANURES.

FRIEND HARRIS:—Several weeks since, I received a copy of your *Rural Annual*. Of late, I have been much from home, and have not found time to acknowledge the receipt of it, and to thank you for your kindness, till this late period. I beg you will excuse the seeming neglect, for I assure you it has not been intentional.

With much satisfaction I have perused the first article in the *Rural Annual*, on "Manures for the Orchard and Garden." The subject of manures is one of great interest to farmers everywhere, and more especially to those of New England. Our soils originally were not generally of first-rate quality, especially when compared with the new and fertile lands of the great West. The long time our soils have been under cultivation, (and that mostly on the "skinning system,") has pretty much used up the plant-food which nature had kindly stored in them; so that now, on these old lands, the farmer gets but small returns in produce for his labor, unless he applies heavy dressings of manure in the course of rotation. But the great difficulty with most of our farmers is, to obtain enough annually, for but a very few acres. This deficiency of manure, we think, is more for want of proper reflection, and lack of knowledge in this particular part of farming, than for lack of means within the reach of most tillers of the soil.

There is abundance of *materials* within the reach of most farmers. Most of them, however, need composting (before applied to the land) with animal manures; but the composting serves a three-fold purpose: First, it neutralizes the acids in the decaying vegetable matters; second, it retains the valuable gases eliminated from the decomposing manure; third, it absorbs and saves for use the urine of the cattle, the most valuable portion. We will here enumerate a few of the materials within "hailing distance" of most farmers. There are the leaves and leaf-mold of the wood-lot, (we put these down as No. 1, being the result of our own experience,) swamp muck, wash of the road, turf on the roadside, earth under the wood-shed and other buildings (rich in nitre). Then there are the liquid manures from the house, bones, and the trimmings of vegetables, etc., cleanings from the vault, ashes, weeds from the garden and fields before the ripening of the seeds, refuse wool from the carding machines and woolen manufactories. Horn piths, lime, fleshings, hair, and leather shavings, from the tanneries, can often be obtained at a trifling cost. Beside all these, there are various other articles, "too numerous to mention," that farmers can obtain toward increasing their crops and enriching their fields; and we are happy to say, that some few, at least, of the enterprising farmers in nearly all our towns, are awake to their interests in this matter, and prosper accordingly; while, on the other hand, in our rambles about the country, we are often pained in witnessing the wasteful manner in which hundreds of farmers manage the winter-made manure of their farm stock. The manure is thrown out of the hovel doors or windows, and exposed to all the washings of rains and melting snows, for months together. The liquid portion is generally lost by draining through the cracks of a leaky floor. Most farmers of this class never think of looking beyond the limits of their barn-yards for materials for enriching their fields; and they usually complain of high taxes, short crops, and hard times; and if they do not think farming a poor business, their sons generally do, and they flee from the farm as they would from a "wrecked steamer," and leave the "old folks at home," to get along as best they may.

However, we trust a better time is coming, when both the science and practice of farming will be better understood, than at the present day. The agricultural press of our country is doing much, very much, to bring about a better state of things. In plowman's phrase, "God speed the good work."

Warner, N. H. LEVI BARTLETT.

SHEEP ON THE PRAIRIES.

EDITORS GENESEE FARMER:—In the fall of 1855, I bought seven sheep—six ewes and one buck, the buck a half-breed Merino; wintered them on prairie grass and clover, about half and half; stabled them at night; had eight lambs the next spring; and sheared 28 lbs. of wool. During the summer of 1856, I pastured them on clover and prairie, they choosing for themselves, and staying about two hours each day in the clover, the balance of the time running on the prairie and in the woods pasture. I killed three lambs, during the summer, and got from each lamb a six-quart pan full of tallow. They were wintered as before, except giving a few oats every day, with bean and buckwheat straw occasionally. Last spring, each ewe had a lamb, and the sheep averaged five pounds of wool.

This winter, I am keeping twenty head, and feeding in a rack (sheltered) copied from the *Genesee Farmer*, with bean straw, prairie hay, oats in sheaf, and a few beans each day. I give them good shelter at night, with the privilege of shelter during the day, if they desire it.

Sheep of the same flock, wintered last season without shelter, only gave two pounds of wool each,—that is, those that survived—for many were frozen.

My sheep have, at all times, winter and summer, free access to good spring water, both iron and lime. They will not drink creek water as long as spring water can be had. Salt they get at will. I have never had one sick, though I have lost a few from being kicked by my horses. C. BRACKETT.

Rochester, Fulton Co., Ind., 1858.

BUTTER MAKING.—Some of your readers may not be aware that it is a great improvement to scald milk, after the grass is covered with snow. If this plan is followed, the butter will come quicker and better. As for coloring butter, a good way is to take say two common-sized carrots to six or eight pounds of butter, wash and pare them nicely, and grate them into a quart of milk. Let this stand over night, and, in the morning, before churning, strain it into the churn. J. O. DAWES.—*Le Raysville, Bradford Co., Pa.*

CURE FOR THE AGUE.—A gentleman recently from Central America—a great place for the shakes—informs us that he has seen many obstinate cases cured by wearing finely pulverized rock salt between the feet and stockings. We can not vouch for the value of this remedy, but consider it worthy of trial. G.—*Plain Farm, Ill.*

LIGHT AND HEAVY SOILS COMPARED.

Light sandy loams are generally regarded, by those who are but little acquainted with them, as rather unprofitable for the husbandman. I have had considerable experience in the cultivation of this class of soils, and also of the heavier, clayey loams, and I am quite decided in my preference of the former to the latter.

Light soils are probably not as rich in the elements of vegetation as heavy ones, but this defect is nearly counterbalanced by the free absorption from the atmosphere of the organic elements of vegetation. A light soil is ready for cultivation as soon as the frost is out of the ground in the spring; you are not obliged to wait long for the heaviest rains to soak away before you can resume its culture; and the most protracted drouths do not stop the plow. Light soils are less affected by those extremes of wet and drouth to which our climate has become so subject. They part with their moisture more readily by evaporation, and are therefore more affected by a few days of drying weather; but when the drouth becomes protracted, a reaction takes place. Moisture ascends, by capillary attraction, from a great depth; and the mellow surface permits the vapor-laden atmosphere to penetrate to the cooler soil surrounding the roots of plants, where it is condensed into dew. In consequence, there is a revival of vegetation on light soils, in a drouth, just as it begins to yield to its influence on heavy soils.

In those very dry seasons which have recently occurred, the only good crops of corn and potatoes (crops requiring nearly the whole season to develop and mature) which I observed, were on light land.

The fertility of light soils is more easily exhausted than of heavy; but then they are more easily resuscitated by manuring, or by growing red clover to be plowed under for manure.

The expense of cultivating a mellow soil is much less than of a compact one. The annual wear of teams, implements, etc., is no small item in the cost of working a farm containing a stiff, compact soil, to say nothing of the greater ease and pleasure with which one tills a friable, yielding soil.

Root crops are much less liable to decay, and are dryer, more mealy, and substantially grown, upon a dry light soil, than when grown upon the opposite class. No one knows the real luxury of a dry, mealy potato, who is obliged to rely upon heavy land for the production of that esculent.

On the other hand, with everything favorable, larger crops of grain and grass are produced upon heavy than upon light soil. For grazing purposes, heavy land is generally more reliable than light; but in case of a severe and protracted drouth, they are liable to an entire failure. They heave in frosty weather, bake in dry, and are flooded, suffocating growing vegetation, in rainy weather.

In view of these considerations, if my choice was limited to one of these two extreme classes of soils, I should choose a light in preference to a heavy one.

The *texture* of the soils we cultivate, has not received the attention from agriculturists which its importance demands. How to render light soils more retentive, and heavy soils lighter, is information which farmers very much need.

Near Palmyra, Jan'y, 1858. P. C. REYNOLDS.

LARGE AND SMALL POTATOES.

Editors Genesee Farmer:—You are undoubtedly aware that a difference of opinion exists as to the proper size of potatoes for seed; also, as to the amount of seed to each hill. As I was with those who believe that large potatoes will produce a greater amount and larger potatoes than small ones, I resolved to test the matter. The result showed a slight difference in size in favor of the large potatoes, but not as much as I expected. I think I shall test this matter more fully at some future time; if so, perhaps you may hear from me again, on this subject. But I will proceed to give you the figures as far as tested.

The rows were eighteen feet long and three feet apart, six rows being planted. The following table shows the result:

Row.	Description of Seed.	Pieces in hill.	Eyes in a piece.	Product in lbs.
1	Long Pinkeye, very large,	2	2	25
2		1	2	16½
3		1	1	15
4	Long Pinkeye, size very small butternut,.....	2	2	14½
5		1	2	12
6		3	2	17½

I also planted a row, the same length as above, with large Round Pinkeyes, putting two pieces with two eyes each in a hill, which produced 36 lbs.

The Long Pinkeye will not produce as much as some other varieties; and you will perceive that the row of Round Pinkeyes produced 11 lbs. over the Long variety, under the same circumstances.

Caledonia, N. Y. D. LEATHERSEICH.

Early Potatoes.—For early potatoes, a correspondent of the *Ohio Valley Farmer* says: "My method is to hang up my early varieties in a basket near the stove, about the first of April or earlier, and keep them near a summer heat, and plant about the 10th of May, or as soon as the ground is warm enough to let them grow, taking care not to break off the sets." I have not the least doubt that they may be forwarded in that manner, to good advantage; yet I think the kitchen-maid would not be very well pleased with the plan of hanging a basket or baskets, containing two or three bushels of potatoes, or even one bushel, around the cooking stove, for from four to six weeks, when they may be started in the cellar nearly as well, if not as early by only a few days. D.—*Gates.*

Test your Seed Corn.—As there is considerable danger of poor seed corn, this spring, I would call the attention of every farmer to the fact, and advise testing it in time, so that, should it fail, reliable seed may be obtained. It may be done by placing a small quantity of shelled corn in a basin, or any other vessel, and pouring warm water on it in the same manner as for soaking previous to planting. Bear in mind, it must be kept in a warm place during the process. D.—*Gates.*

The substantial prosperity of a country is always in the ratio of its agricultural industry and wealth.

AGRICULTURE IN WESTERN VIRGINIA.

Editors Genesee Farmer:—I am aware that you take much interest in everything relative to an improved system of agriculture, and my particular object in addressing you is to give you an idea of what *can* be done in Western Virginia, by a judicious system of tillage. But it may not be amiss to state that while the eastern portion of our State has been worn out and impoverished by the plan of farming a large area and reaping a light crop, barely sufficient to support its tenantry, this region of the State has been overlooked until within a few years past. Since the completion of our railroads and turnpikes, the development of its agricultural resources has been very rapid. It has aroused an energy and a spirit of emulation in our farmers, that has produced a marked improvement; and we need but two things to make this section of Virginia one of the most desirable and pleasant portions of our Union, which are these: a general circulation of the *Genesee Farmer*, and a colony of scientific and practical Yankee farmers. We have already had a few enterprising nurserymen, who have brought us some very choice fruit. In this locality, the "peculiar institution" need not be an objection to a residence in our midst, even with those most opposed to it. This county lies in the Valley of the Monongahela river, the soil of which is rich and productive, rather uneven, but its hills are underlaid with heavy strata of very fine bituminous coal, and lime-stone in great abundance, of superior quality. But my communication is becoming too much *in extenso*, and I will proceed to give you the result obtained by Mr. Chapman John of this vicinity, a gentleman of much respectability, and a practical farmer. He raised, the past season, on twenty-eight acres of land, the following:

400 bushels Corn, forty cents per bushel	$160.00
86 " Wheat one dollar per bushel	86.00
21 tons of Hay, six dollars per ton	126.00
100 bushels Apples, twenty-five cents per bushel	25.00
50 bushels Oats, twenty-five cents per bushel	12.50
Corn, Fodder, &c	50.00
One lot of Hogs	50.00
Pasturage for three cows and one horse	30.00
One lot calves	20.00
Butter, and Vegetable garden	40.00
	$599.50

He has been in possession of this "patch" but one year, previous to which it had not been very skillfully managed by its former proprietors.

I am just informed that another farmer in this county, (Mr. Shultz,) who has afforded some of the "old fogies" some amusement by his disposition to save and apply fertilizers, has raised, the past season, 368 bushels of very fine white wheat on a field containing eight acres—averaging 46 bushels per acre. The crop of potatoes in this region was very abundant and free from rot, and indeed our garners are full to overflowing. H. M. G.

Morgantown, Monongalia Co., Va., Dec. 1st, 1857.

For Sod Crop—or first after breaking—try millet. It is equal to many varieties of grass for fodder, and grows luxuriantly sowed as late as July. G.—*Out West, Jan'y*, 1858.

A recent traveler in China says, the Chinese farmers, instead of applying manure to the soil, scatter dry pulverized poudrette on the leaves of the plants.

CALIFORNIA QUAIL.

Since the settlement of California by our countrymen, quite a large number of these birds, of which our figure at the head of this article is a fair representation, have been brought east. Last June I received from my son, who resides in San Francisco, a pair of these beautiful little birds, the only ones out of eight, that survived the passage. The female died about six weeks after they arrived here. In November last I received another pair, out of twelve that were sent from San Francisco. As the last pair were reared in confinement, I am in hopes of being enabled to raise a brood or two the coming season.

The manners and habits of the California quail are similar to our birds, which formerly were quite plenty in this State; but now very scarce, and nearly extinct.

Description.—The general color of the upper part of the body and wings in the California quail is of a dusky brown, assuming a leaden or slatey tinge on the tail and on the fore part of the breast, upon which it advances in the form of a broad band. The fore part of the head is of a mixed ashy grey, and the hinder part blackish brown. The head of the male is adorned with two small black plume-like feathers bending gracefully forward. The throat is black with a small streak of white running down the sides of the neck and encircling the same. The feathers at the back of the neck are small and triangular, of a slatey hue, with a narrow black margin and white tip. The female has but a little crest, and the general tone of the coloring is browner and more obscure. The figure is plump and stout; length about nine inches. Their flight is heavy and strong, with the same buzzing sound of our quail, when rising on the wing. They are hardy and stand our climate the coldest of winters—even the last severe winter. There is not the least doubt but they would breed in this climate in a wild state.

Their food consists of wheat, oats, buckwheat, grass, and canary seeds. C. N. Bement.

Springside, Poughkeepsie, Feb'y, 1858.

The best remedy for scours in Sheep, is milk thickened with wheaten flour.

MANAGEMENT OF DAIRY COWS.

Eds. Genesee Farmer:—Much has been written upon this subject, and many rules have been laid down for the winter management of different kinds of stock; and as cows are among the most profitable stock we have, they should receive a due share of attention.

As cows are generally kept for profit, they should be well cared for at all seasons of the year, for the profit depends principally upon their management. Keep no more than can be kept well; for a few cows well fed are better than a greater number half-cared for and half-milked. They should be stabled through the winter, if possible, and be properly fed at all seasons. They should be salted regularly, the year round. Twice a week, I think, is enough in the summer.

Milking is of great importance, and should be conducted regularly, and by the same hands, and as quickly and still as possible. Many farmers in this section have a very bad practice of letting their cows lie in the yard over night, after milking. It is very injurious to milk cows too late in the winter. At least two months should be allowed before coming in. Toward spring, they should have a little meal or bran every day, but avoid giving anything that has a tendency to increase their milk, before they come in.

Mr. A. J. Taylor, of Wyoming Co., N. Y., speaks very lightly of fastening cows to upright stakes, as he calls them, and crowding them too thickly together; but, notwithstanding all the improved styles of fastening, most of the New England dairymen have again resorted to the old-fashioned way of securing to stanchions. Mr. T. says, a stable thirty feet long will make nine stalls. Now, allow me to say that this is as thick as I ever saw them, in any form.

J. O. DAWES.

Le Raysville, Bradford Co., Pa.

Pigs should be kept clean.—The pig certainly in hot weather will search out and enjoy any dirty and wet hole, but he is nevertheless a very cleanly animal, and always thrives fastest on clean straw in a clean sty; he seldom, except by accident, leaves any droppings of his excrement in his sleeping apartment, and his sense of smell is so acute that he has actually been trained to scent game.

Genesee Farmer Prize Essays.

AGRICULTURAL PAPERS.

"On the propriety of farmers supporting none but purely agricultural papers, *as such;* and is their publication monthly often enough?"

As I understand the above, the question is whether farmers should or should not support newspapers devoted exclusively to agriculture, in preference to those of a miscellaneous character. That farmers need information on many other subjects than agriculture, is beyond question. They need religious information as much as others, and they should know something of politics, and they have also a very laudable curiosity to learn the general news of the day. How then are they to get the information they need in the best and most economical manner?

In the early settlement of a country, when the population is sparse, it often becomes necessary for one man to turn his hand to various occupations. The blacksmith's and shoemaker's are the most important trades, and the first to be procured and patronized. The former will mend brass kettles and gun-locks, and the latter harnesses and bellows, besides doing the regular business of their trades; and although such men are indispensible in their spheres, we do not expect great perfection in their workmanship. If the country prospers and goes ahead, the coppersmith, gunsmith, and harnessmaker come in, and all mechanics become more perfect in their work and learn to do it in a more economical manner.

It is an admitted principle in political economy, that the more labor is divided the better and cheaper it is performed; consequently the manner in which labor is divided in any country is a pretty good index to the prosperity, intelligence, and refinement of its people. Fifty years ago we had no agricultural papers, and few if any religious. Our journals then partook more or less of the commercial, political, religious, and agricultural characters. As we have advanced in civilization and refinement the wants of the reading people could not be met without a division of labor in this department, and we now have separate newspapers devoted to all the trades, professions, and occupations, and who will say that this division has not contributed to our progress? Take one of the newspapers of even thirty years ago and compare its articles on agriculture with, for instance, the editorials of the *Genesee Farmer* of the past year, and you will find abundant evidence of progress. We have, to be sure, many valuable articles on agriculture in journals devoted mainly to other professions, but they are invariably credited to agricultural papers. If there is any one subject which more than any other requires the undivided energies, mind and attention of a conductor of its journal, that subject is agriculture. The world is just awakening to the fact that more science and intelligence is necessary in this department than in any other, and one of the great reasons is that it is incapable of that division of labor which tends so much to advancement in the mechanic arts. We have journals of law, of health, of medicine, and of mechanics. We have miners' journals, farmers' journals, railroad journals, vetrinary journals, and gardiners' journals—journals hydropathic, homeopathic, phrenologic, scientific, and spiritual—and if a man wishes to turn his attention to any particular branch of industry he can make his selection and pay only for what he wants. Surely these journals can be, must be, and are better conducted than are the same departments in those which have with agriculture a little of politits, love-tales, casualties, shocking accidents and dreadful tragedies, with a sprinkling of conundrums, rebuses, and enigmas. By this division of labor newspapers have become very much reduced in price, while at the same time the ability of the reading community to pay for them has been doubled if not quadrupled, and on the farmer's reading table instead of the weekly miscellany, which perhaps went the round of the neighborhood, we see the quarterly review, the monthly magazine, the weekly, semi-weekly and perhaps the daily journal. These dailies, semi-weeklies and weeklies, although they perhaps answer well the purposes for which they were intended, must still be got up in somewhat

of a hurry, and are liable to many blunders and mishaps, and when received by the subscriber are often laid aside for the moment and never resumed till wanted to wrap up a bundle. In fact they are of little value for future reference. The monthly journals are got up with more care, in less hurry, are less liable to errors and oversights, are in a more convenient form, the subject matter more condensed, contain more grain and less chaff, are more thoroughly read and better understood, contain more useful matter for future reference, seldom condemned to the rubbish heap, but are laid up in the library and read perhaps by the next generation. They take the place among newspapers, of standard works among books. If you want more reading matter on the same subject you can take more papers; there are many (but not too many) in the country, and you can get two, three, and often four monthlies for the price of one weekly, and you then have the opinions of different authors on the same subject, which if there be truth in the old adage that "two heads are better than one" is a decided advantage.

Gorham, Ont. Co., N. Y., Jan'y, 1858.

MUCK APPLIED UNMIXED TO THE SOIL.

Having quite a bed of muck in my possession and knowing its value as a fertilizer when rightly applied, I have taken some pains to ascertain the best method of using it so as to obtain the greatest benefit.

I have used it with manure and other refuse of the farm, but my greatest use has been in applying it unmixed to the soil. Winter or a dry time in summer is the proper time to remove the muck from the swamp. It should be piled in large heaps when removed to protect from sun and rain. In autumn draw and spread the muck upon the land that is soon to be plowed, for the muck should not remain spread upon the surface any length of time as it proves an injury to it by allowing the gasses to escape. If the muck is removed from the swamp in winter, it would be best to apply in the spring to land before plowing. Spread on green sward and turned under it makes an excellent face for corn with two harrowings, but should not be cross-plowed. Spread on in the spring on old ground and well plowed under, it is quite equal to stable dung for potatoes; or at least I could perceive no difference on ground prepared alike—half manured with stable dung and half with swamp muck. It leaves the ground in excellent order for seeding, being free from weeds. It is not quite equal to stable dung for top-dressing meadows, or at least I have not found it so.

Almost every farmer knows the value of muck applied to the manure heap as an absorbent, but few make a practice of using it alone. I consider it as cheaper applied unmixed and nearly as good; but corn and potatoes appear to be benefitted more by it than any crop on which I have applied it. It gives good satisfaction applied to the garden; but I have always applied stable dung well rotted the same season, so I am unable to speak definitely in regard to the muck.

Where I have used it unmixed with manure and no manure was applied to the land, I consider the grass-crop as good as other pieces in the same field that were manured with stable-dung—the treatment in both cases being the same.

Muck is a valuable fertilizer and should not be allowed to remain unused as it is in many cases when the adjoining fields might be so much benefitted by its use. E. B.

Pharsalia, N. Y., Jan'y, 1858.

ADVANTAGES OF PREPARING FIRE-WOOD IN THE FALL FOR WINTER USE.

Economy should be the motto of every farmer; and in no way can more be saved on one thing than in preparing the winter's wood in the fall. It saves at least one-third of the wood which would be worse than uselessly expended in burning the large amount of water contained in the green wood. Another advantage is in the season. It is so much better and pleasanter in the fall—more convenient getting around in the woods—more comfortable to the choppers who can work and not suffer from cold.

After fall work is done, chop, draw and pile your wood in your wood-house, and when the cold snowy days of winter come, there it is dry and nice ready for use; and besides enjoying the cheerful looks and kind words of your wife and children, the comfortable warmth produced by the sparkling fire and the pleasing thought that your care and forethought in providing dry wood has robbed old winter of half his terrors, and given you leisure to improve your mind and amuse yourself and family through the dreary, stormy days of winter, will more than repay any extra trouble in preparing the wood.

Who will doubt the utility of the fall preparation when they think the matter over carefully—the cold stormy days of winter come; the negligent farmer has been engaged on some delayed business until winter is upon him; he has drawn an occasional draft of wood and chopped it at the door to meet immediate wants, but he sees now there must be a supply secured; and when the snow blows and the piercing cold chills his blood he must away to the wood-pile to keep himself in wood, and when he returns to the house he finds it cold and cheerless, his wife cold and cross, the green wood steaming and frying in the stove with no warmth for the shivering family.

Can the man who neglects to prepare his winter's wood before it is wanted for use expect to enjoy domestic quiet and comfort—for what will disturb the peace of a family quicker and more effectually than a poor fire? it freezes the pleasant smile and loving nature of the wife and renders her cross and fretful; and who can blame her? Everything goes wrong; nothing can be done in season, and with no comfort when it is done. In fact I am of the opinion that the neglect of preparing wood in the fall is the cause of more domestic unhappiness than any other one thing.

I do not write this without having experienced its effects. I have tried the green wood experiment to my satisfaction—suffered its disadvantages and losses, but nothing but absolute necessity shall ever compel me to do it again; it is so much more economical in the amount of wood used, so much better and pleasanter chopping, drawing and piling; so much better for family use; prevents so much hard work in cold weather when the farmer needs rest and time for the improvement of his mind.

The leisure which the fall preparation of wood allows to the farmer is a great advantage. His physical strength is worn and exhausted by the hard

summer's toil; his mind is neglected for want of time to attend to it; but the cold days of winter and the long evenings give the farmer by his fire-side a chance to inform himself of the events of the day and to obtain a knowledge of his profession, so necessary to success. E. B.

Pharsalia, N. Y., Jan'y, 1858.

SUPERPHOSPHATE OF LIME AS A MANURE.

From the manner in which agriculture is too generally conducted in our country—taxing the soil to its utmost capacity in the production of grain and forage, in raising stock, and then selling the produce without returning to the soil an equivalent in manure for the elements of fertility thus abstracted, among the most important of which are the phosphates—superphosphate of lime is now in many places an important fertilizer, and is destined soon to become an almost indispensible agent in renovating partially impoverished soils throughout a large portion of the Eastern States. Lands that have been a long time under cultivation, and the grain and stock raised thereon sold, and no manure used except what is made from the hay and straw, and the small amount of grain fed to working stock, together with lime, often become so drained of the limited amount of phosphates they contain as finally to produce greatly diminished crops. On such soils, and others naturally deficient in phosphates, the application of superphosphate of lime has an almost magical influence.

I have been experimenting a little the last few years in its use, both with what I have bought and with that of my own manufacture. The first application was to grass. It was sown on the sod in the spring of the year. Its effect was soon perceptible, and the grass was much heavier there than on any other part of the field, and continued to be so for two or three years, or until the ground was plowed.

The next experiment was with about one ton of my own manufacture, applied to wheat in conjunction with guano, on oats stubble land. As guano with me never produces much effect after the first year, I applied the superphosphate with the view of benefitting the grass after the wheat. The quantity of guano sown was two and one-fourth cwt. per acre, plowed in, and the superphosphate was sown over six and a half acres on the plowed ground, and harrowed in before drilling the wheat. A little that was left was sown over a patch and marked; thus giving it a double coat. The wheat on this patch was perceptibly better than that around it. The result of this treatment was a very large bulk of straw, but only twenty-three bushels of wheat per acre. It was, however, good; weighing sixty-four pounds per bushel. It produced a strong set of grass, and the last harvest a good crop of hay was cut off the ground, estimated by some at two tons per acre. The superphosphate was made from bones collected in the neighborhood for which I paid fifty cents per cwt.; ground, and dissolved in sulphuric acid. The bones were coarsely ground, and it took fifty pounds of acid to one hundred pounds of bones, and still left some not dissolved. It was then dried with saw-dust and sown by hand. The acid costs in Philadelphia $62,12½ per cwt. It should be applied to the bones in a wooden vessel, such as a half hogshead, and diluted with two or three times its bulk of water.

Superphosphate thus made is much better than what is bought of the manufacturers, who make their article out of burnt bones—*if they use bones at all*—the organic matter being thus all destroyed. The great difficulty in the way of making our own superphosphate is to get the bones crushed and to get enough of them.

The next experiment was in the fall of 1856. I sowed some of the bought article on wheat where the ground had been manured with the outside barn-yard manure, which was weak and not good for much. The result was no benefit to the wheat, but it caused a fine set of grass which grew so thick the past wet season after the wheat was cut, as to choke out the weeds; while on the ground that the shed manure had been put, the weeds grew strongly. I also applied it to wheat alone, but with no apparent effect.

Again, in the Spring of the last year, on a part of a grass field that had not been manured when in wheat, I sowed the bought article at the rate of a barrel per acre. The result was one hundred per cent. more grass there than on any other part of the field that had been manured. The last fall I sowed a quantity of my own making on wheat, but of course cannot yet tell the result.

My conclusion is, that here both kinds of superphosphate are always beneficial to grass, and the home made article will raise good wheat. And yet its beneficial effects are not universal. A friend a few miles distant has used it largely with no effect whatever, while others have raised good wheat by using the bought article. The only way for farmers to decide the matter for themselves, is to try a little in a small way first, and act according to the result. Where its good effects are plainly seen, it would no doubt pay to sow it on wheat ground before putting in the wheat, even though it has been manured, in order to insure a strong growth of grass. L.

Cochraneville, Chester Co., Pa.

THE BEST METHOD OF CURING TIMOTHY AND OTHER GRASSES.

Timothy is ripe or ready for cutting when it drops the blooms, and herdsgrass is ripe when its earliest seeds are in the dough state. Cut the grass when there is no dew or rain on them, and as fast as cut shock up in snug shocks six feet at the base and six or seven feet high. Beat and settle them with the hay fork and rake them down to make them turn rain. This should all be done so rapidly as not to allow the hay to wilt. Some five or six days after shocking go over the meadow and run your hand into the centre of every shock; most of them will be found cool and dry and need no further attention. But if you find any of them warm turn the shock down as low as its centre and allow it to remain two or three hours, or till perfectly cool, then shock it up as before. When all the warm ones are treated in this manner your hay will need no further attention till it is perfectly cured and ready for stacking or hauling to the barn. This method makes as green and sweet hay as you could desire; and one great advantage is that you can make good hay in rainy weather if you can but get time between showers to cut it and shock it up dry, for it will cure perfectly though it rain every day. F. H. G.

Rome, Smith Co., Tenn., Jan'y, 1858.

RECLAIMING AND MANAGEMENT OF BOGGY LAND.

Some experience and considerable examination of written reports on the subject, teach me that the most effectual and thorough process of reclaiming bogs—very wet soils with a vegetation of small bushes and coarse grasses—is,

First, To thoroughly drain the land as it can be done by frequent ditches, and

Second, To cut off the whole surface of the ground, and, piling it in winrows, let it dry, and then burn the whole to ashes.

This method, taking all things into account, is found to be more economical than that generally practiced, of cutting off the bogs and brush, and then subduing the coarse vegetation by frequent plowings and harrowings. I have found it exceedingly difficult to reclaim the soil from its original products by the latter process. By paring and burning, on the contrary, the coarse materials of the land were at once reduced by fire, and afforded a much needed amendment in their abundant ashes. The surface, with slight plowing or thorough harrowing, is at once fitted for the production of abundant crops.

The after management is simply to keep the land *thoroughly drained*, so that no water stands within three feet of the surface of the soil; to deepen the plowing slightly, year after year; and to give such manures as the case may require. Lime and ashes will be found beneficial in hastening the decomposition of the muck—for in its original state it was not fitted for the growth of valuable crops.

—Another method of reclaiming boggy land is to proceed as before, in

First, Thoroughly draining the soil of all standing water.

Second, After clearing the surface, to carry on sand, gravel, or loam, spreading it over the surface to the depth of two or three inches—perhaps deeper. After allowing the bog to settle awhile, harrow the ground thoroughly, and sow oats and grass seed. Some apply a dressing of composted manure previous to seeding.

This plan works faborably, if, as before, the land is *drained thoroughly*. If not, in a few years the coarse wild grass will work up through the covering, and the product will be of little value. Well drained, the bog settles rapidly, may be plowed frequently, and will in time become thoroughly subdued and fit for any cultivated crop. H. A. S.

FATTENING SHEEP IN WINTER.

The first thing necessary is to have a warm place for them, where they can have free access to water. Feed clover hay three times a day—grain morning and evening, and roots at noon. If you have no roots substitute wheat bran made wet with water. Bran will not aid much in producing fat, but it keeps the digestive organs in good order and prevents stretches which sheep are subject to when kept on dry feed alone. If corn is used alone, be careful not to feed too much; I prefer corn and oats mixed. I have had sheep gain twelve pounds per month, fed in this way. Feed with regularity, and do not trust too much to boys and hired help, but see that they get just what they need and no more, which can only be determined by close observation.

Lyons, N. Y., Jan'y, 1858. EZRA RINGER.

BEST SYSTEM OF ROTATION ON A CLAYEY FARM.

That system of rotation is best, beyond doubt, which is most profitable in present returns and tends to keep the land in good condition, both in fertility and friableness.

The best rotation which I have any knowledge of, is to commence by putting all the manure that can be raised on the farm, in its unfermented state, on the field for Indian corn, the most in the poorer places, and turn it in deeply before freezing ceases. To trench-plow is better. In the spring, harrow early and thoroughly, and plant. Cultivate clean.

In the fall, put the ground in good condition and sow wheat, or sow oats next spring, then sow the wheat or oats thickly with clover and timothy. If the field be sown with wheat, the timothy had better be sown at the time of the sowing of the wheat, as it is less liable to be injured by spring drouth, and the clover should be sown the spring following. This field of clover and timothy should be pastured two years, or mown, as circumstances may direct. The last crop of the second year, if possible, should be reserved to be plowed under. The field should be deeply plowed late in the fall or winter, to be planted to corn the next spring. This course will require four fields; and when the rotation is fairly attained, there will be one field in corn, one in wheat or wheat and oats, and two in clover. The fields will stand one year in corn, one in wheat or wheat and oats, and two years in clover.

Let all the manure that can be spared be hauled, in its unfermented state, upon the clover field intended to be plowed, and spread, to be plowed under with the last crop of clover.

This course will not only greatly increase the fertility of the soil, but will improve its mechanical condition. The long roots of the clover, extending deeply into the earth, will draw to the surface inorganic manure from the subsoil. The roots and tops of the clover and timothy will furnish a large amount of organic manure for the use of the corn, wheat, and oat crops, that are to succeed. The deep plowing, the decaying of the manure and the tops and roots of the timothy and clover, the exposing of the plowed land to the influence of freezing and the atmosphere, will have a tendency to pulverize the land easier and better than can be done in any other way.

Of course, there are other fields that may be needed, such, for instance, as one for rye, one for meadow, etc.

No field should be in permanent pasture that is suitable to plow; far better let it come in the rotation of crops. We make permanent pasture of our woodlands, sown to blue grass.

Another very good rotation is to sow a field of corn thickly down to rye early in the fall—last of August or first of September. Pasture the rye late in the fall, and until April of the succeeding spring; then let it grow up until it is ripe. Let it stand until the middle of August—it keeps well; then pasture it on the ground to hogs. This leaves a large amount of straw and manure on the ground, which, with the green rye that will come up, may be turned under for corn the next spring. If the land is strong, it will improve under this rotation. But if it be not very good, sow in rye as above, and pasture down; then plow and harrow the land, and there will be a sufficiency of seed to thickly set it a

second time. Pasture it down as the first year, and cultivate in corn the third year.

By following this course, the land will continue to improve year by year. A field may be treated as above to great advantage on a farm. Last spring, green food for stock was very scarce in this country; the fields were very bare until late in the spring. Passing through Shaker Village, (Mercer county, Ky.,) I saw a field of rye three times as tall and more than twice as thick as any I had seen. I asked them how their rye came to be so much better than any I had seen. They told me that was the second year the field had been in rye, and they had plowed and harrowed the land for the second crop, and they designed pasturing it until the 15th of April, after which they would let it grow up. This must have been a very improving crop on clayey land, and very remunerative. Three fields will be required for this rotation. They will stand thus: first year, corn; second year, rye; third year, rye. This will be a very good rotation where a part of the farm is clay. But some say rye does not thrive well on a clayey soil. Let the ground be in good condition, and the rye put in well, and my word for it, it will grow. The large amount of straw left upon the land has a good mechanical effect when turned under, loosening the soil and making it easy to pulverize. Of course, all the manure should be applied that can be, and that in its unfermented state.

Where circumstances permit, I much prefer the first rotation. For this country, for improving the soil and making it easily cultivated, I do not believe it can be excelled, on our clay lands. A. G. M.

Chesher's Store, Ky., Jan'y, 1858.

BEST SYSTEM OF ROTATION ON A SANDY FARM.

For such sandy soil as we have on the plains, here in Michigan, where wheat and wool raising go hand in hand, the following rotation I consider "about right:"

Divide the farm into six principal lots, reserving land enough for several small lots, for orchard, special pasture, and the raisfng of root and other fancy crops, which do not enter the system of rotation.

Commencing with clover sod,

	First Year.	
Lot No. 1.		*Lot No.* 2.
Plant to corn, among which sow rye at the last cultivation, and harrow in with a one-horse harrow. Pasture with sheep in fall, both before and after corn harvest. While the rye pasture is good, the sheep will not touch the corn.		Plow in clover, and sow to wheat in the fall.
	Second Year.	
Seed to clover; harvest rye.		Seed to clover; harvest wheat.
	Third Year.	
Pasture clover.		Mow clover.

The rotation commencing again the fourth year, may be varied, by sowing wheat on No. 1, and planting corn on No. 2, so that wheat will come on the same lot once in six years only, and the same of corn and rye; while clover, the great renovator of sandy soils, comes on the same lot every third year.

By this system we have fields of wheat, rye, corn, clover meadow, clover pasture, rye pasture, and summer fallow, every season.

The green rye is excellent pasture in fall and spring, when it is death to clover to pasture with sheep. And rye and wheat straw, corn stalks, clover hay, rye and corn meal, and a few roots from one of the small lots, will feed the sheep, team and other necessary stock, during the winter.

Apply the manure of the farm to the spring crops, and remember that plaster is as necessary to the growth of clover, as the clover seed itself.

Four Towns, Mich., Feby, 1858. SOLON COOLEY.

EXPERIMENTS IN FEEDING CATTLE CUT STRAW AND HAY.

The first day of last December I purchased four cows of the common breed. They had all given milk seven months or more at the time I purchased them, and then gave only about eight quarts of milk per day.

I began to stable them and cut buckwheat straw for them, which I scalded with water in which a quart of flax seed had been steeped for four or more hours. I also put four quarts of buckwheat bran on the mess at each feed. They were fed this twice each day, morning and evening. At noon they were fed on cut hay with half allowance of bran, making two and one half quarts of bran each cow received per day. They doubled their milk in a very short time, and trebled the cream and butter. I have fed them separate. Charged them five dollars per ton for the straw, and seven for the hay; seventy-five cents per hundred for the bran, and one dollar per bushel for the flax seed, which I purchased at that price. Of course they all fail of their milk now, as they will be new milks in the spring, and one is now nearly dry.

I have milked them regularly twice each day. Up to January 23, they had given by measure five hundred and seventy-one quarts of milk, (571); and from that we have made thirty-eight pounds and nine ounces of butter, besides using a good deal of cream in the family. So the account stands thus:

Four cows,	Dr.
To one and a half tons buckwheat straw — $5,	$7.50
To one half tons hay — $7	3.50
To one and one-fourth bs. flax seed — $1,	1.25
To 716 pounds bran — $0.75,	5.37
	$17.62
	Cr.
By 571 quarts milk — 2 cts.,	$11.42
By 38 9-16 pounds butter — 18d,	7.25—$18.67

Leaving a profit of $1.05 to pay for extra trouble. But that is not all the profit, for by following this course with all my cattle I have made them gain in flesh, and used up the buckwheat straw, which hitherto has gone for litter only. I now cut feed for all my cattle, and shall continue the practice. It is a matter of importance to make the cows give milk enough in winter to pay for their keeping, and at the same time gain in flesh. Buckwheat bran is one of the best things a cow in milk can be fed.

I am building barns and stables in which I can carry on the operation on a large scale with economy, believing it pays fifty per cent. on cost of sheds and time, to stable every hoof of horses and neat cattle, and cut *all* the feed and grind the grain.

I wish other readers of the *Farmer* would report progress in this matter, as it is a thing but little understood. G. C. L.

Lynn, Susq. Co., Pa.

THE BEST PLANTS FOR HEDGES—THEIR MANAGEMENT, &c.

Much has been said, of late years, about fencing; and it is a subject in which farmers are much interested. The expense, efficiency, and durability, are the main points to be considered. The great West is not the only place where the inquiry is made, with what material, and how, shall we fence our farms? A great portion of the east is in some degree deprived of what was once a burden—its forests of timber; hence the necessiiy of a living and permanent fence. The Osage Orange, no doubt, is the best plant for this purpose. The vast amount of this plant that has been successfully cultivated in the Western States, is sufficient proof of the assertion. A farmer of Peoria county, Ill., writes that he has set over thirty miles of it, within the last four years, and part is now sufficient to turn stock. He could not procure plants enough last spring, but purchased seed and planted twenty-five acres. This shows the success and confidence of those that have tried it. The demand is greater than the supply.

The seed can be planted where the hedge is needed, but requires much care. Many have tried seed, but failed for want of experience. In order to be successful, the seed (like that of the locust) should be sprouted by pouring on hot water, changing it daily. The ground should be well prepared. Plant plenty of seed, and at about the same time you would corn. If the soil is dry and light, it should be packed to retain the moisture. Keep it clean from weeds, with the cultivator and hoe.

It is considered the cheapest and safest way to buy the plants of nurserymen. They can be bought here for about three dollars per thousand. Let them remain in the ground until spring; or, if taken up in the fall, they may be kept in sand or earth with safety until time to set in the spring.

Setting and Cultivation.—Set your stakes, and plow deep where you want the fence, both fall and spring, if convenient. A very good way for setting is to stretch a long line, take a basket of plants and a spade, put the spade in the ground, slanting, the length of the blade, and place the plant under the spade as you remove it; stick the plants about six inches apart, if the ground is dry, and tread on them as you go. Some of them may not start for some time. Cultivate them well. If you have a row of choice corn or potatoes on each side, it will be no disadvantage, but will help you to remember it. Trimming is of great importance. When eight or ten inches high, cut them with a scythe within about three inches of the ground, the next time a few inches higher; twice in the course of the summer, as a general thing, is sufficient. After being cut, many sprouts will start from one stock, and make a fence that will stop a pig or chicken; there is nothing that will like to disturb the hard, thorny bush. Four or five years will be sufficient, if well cultivated and trimmed, to make a good fence.

The two past winters have been beneficial to some hedges and injurious to others. The frost trimmed those that had been neglected, but the next spring they threw up a thick and vigorous growth. The severest winter will only kill the growth of the previous season. Even if killed after turned out to stock, it will remain permanent for many years. To be prepared for a hard season the first year after setting, cover with a little straw or coarse manure. Various machines have been invented for trimming, which operate successfully.

I consider a hedge of great benefit to an orchard or garden, by checking the cold winds.

The expense is about fifty cents per rod. Compare this with the expense of a board or rail fence, and the continual repairs. CENTER.

Lee County, Ill., Jan'y, 1858.

USE OF MUCK IN COMPOSTS AND AS LITTER FOR STABLES AND YARDS.

I have for some time practiced littering my stables with muck and dirt of all sorts, except sand. It is very beneficial as an absorbent of the liquids and gasses, but it has the objection when used in stables of soon forming mud with the liquid manure, and so requires to be often renewed. I like sawdust better for litter, and mix the muck with the manure as it is thrown from the stables. Sawdust keeps the animals much cleaner, and if the stables are cleaned daily, there is but little loss from evaporation before the muck and manure are mixed.

An absorbent of some kind must be used if we are going to make headway in farming. I believe that in the method common all through the country, of wasting all the liquids and all the gasses that escape before the manure is drawn upon the soil, we lose full one half of all the manure we make. As a consequence our crops are full a third lighter than they would be, and that third is or would be, the profits of the business. Most of us only make ends meet. The out go being as great as the income. But let the wasted manure be saved, which can be done at small cost, and the business will be put on quite another footing.

There is not any danger of getting the land too rich. I own a farm in Illinois. Three years ago the coming spring I had occasion to haul out a large pile of manure, the accumulation of several years, or else move the barn. It was put upon a piece of prairie which had only been broken a short time, and was already rich. A number of old farmers said it would spoil the land, and the corn would be all stalks, for we put forty loads on the acre. There was fifty acres in the field. The average was forty-five bushels of shelled corn to the acre; but where the manure was put it was a trifle over eighty bushels (of sixty pounds), to the acre. O. C. I.

Linn, Susq. Co., Pa.

MANAGEMENT OF WOODLAND.

If it is desirable to secure a second growth of wood, let the first be cut early in the spring, when the sap flows most freely. Cut as near the ground as possible, and the sprouts will be more thrifty and less liable to be broken off, as well as take root for themselves more readily. If a second growth is not desirable, cut when the sap does not flow, and very few sprouts will be thrown out from roots or stumps.

Cut off the forest clean as you go, and the new growth will have an equal chance, and make handsomer and better trees. When the full-grown and decaying trees are selected out, the under-growth will be overshadowed by the trees which are left, and the woods will soon become thin and of decreasing value. Cattle, sheep, and the fire must be kept out of the woods where undergrowth is desired.

Jan'y, 1858. W. L. M.

WHICH ARE THE BEST HORSES TO WEAR—THOSE FIFTEEN OR SIXTEEN HANDS HIGH?

This is a subject on which there will doubtless be a great difference of opinion, but it all depends upon this: at what work are they to be used, and how are they to be fed? There can be no doubt that for heavy work, such as heavy teaming, ploughing, and the like, where horses are driven slowly and well fed, that those sixteen hands will wear best, and what is more, give the best satisfaction to their owner; for who does not like to follow the plough after such a team? But there is a fault in too many of the horses which are bred at the present time—they have the extra hand all in the leg, and the man who knows anything about a horse will give all such animals a wide berth, as they are decidedly the worst to wear that there is to be found.

Again if horses are to be sometimes worked hard and at other times driven hard, and what is worse than all, and but too often the case, poorly fed into the bargain, the small horses, such as the French breed, will stand such treatment better than any other with which I am acquainted. They are hardy, easy to keep, and will stand to be driven on the jump the one hour and draw a heavy load the next. So the man who wants to get horses to wear well had better first consider how he is to use them and the work they are to perform, and then he can easily judge of the horses that will suit him. R. S. T.

Niagara, C. W., Jan'y, 1858.

WHAT IS THE CAUSE OF THE FAILURE OF SO MANY TREES SENT OUT BY NURSERYMEN?

Vegetables, like animals, can not be removed from good care and high feeding, to want and neglect, without suffering in consequence. Remove the animal from plenty of grain, grass, or hay, to sterile fields or empty stalls, and compel it to procure its own living, and, if it does not die, it will present but the diseased shadow of its former self; and, if no care is afforded, the animal is lost beyond recovery for profitable purposes. It is the same with the tree. It is raised in rich soil, where it can revel in high living; the best of care is bestowed upon it; all the wants of the tree are supplied; its enemies are driven off or destroyed; and in a few years it is an object of beauty and delight. But the age has arrived when it must be transplanted from its genial soil to lands of the distant farmer or fruit grower. Now come its days of starvation and neglect—a prey to cattle and horses, that destroy its branches and break it to the earth. And how do a majority of farmers, who take the trouble to send to a distance to procure good fruit trees, treat them when they receive them? Not one in a hundred ever thinks of setting them in a cultivated field and giving them the same care he does the rest of his crops;—not at all. They are placed by the side of fences, in the tough sward of the meadow or pasture, the roots crowded into a hole barely sufficient in size to contain them. Is it any wonder that trees managed in this way do not flourish? Is it any wonder the farmer or owner of such trees is discouraged in trying to raise good fruit, and condemns at a glance all accounts of large and delicious fruits and their profit to the cultivator?

When will farmers (I say farmers, because most all the trees sent out by nurserymen are purchased by farmers,) learn that a tree that has been carefully cultivated and cared for, can not flourish with such treatment? Can a fruit tree be expected to thrive without care, any better than any other crop that is raised for use or profit? I have seen, lately, several young orchards, which the owners procured from nurseries in Western New York, at much trouble and expense, that are almost a total failure. The trees were set out four or five years ago, and were fine trees then; but the old way of setting in grass ground was followed, with no cultivation beyond setting them; and there they stand now—not dead, to be sure, but no larger than when they were removed from the nursery, and no prospect of their bearing for years to come. The owners of these same trees consider the nursery business as a humbug—something to catch the unwary, and fleece them of their money for what will never be of any use to them.

Now, to sum up the matter, is it anything but a want of care and proper cultivation that causes the failure, in not giving the trees similar treatment to that which they received while growing in the nursery? The trees are of course all treated alike when packed for transportation; but yet we see the mass of them prove a failure, and but very little good fruit is raised among the farmers.

Once in a while we see a careful, observing man, who obtains trees from nurseries, follow as nearly as he can the mode of culture which the tree formerly received, cultivates and manures them as he does his crop of corn or potatoes, and he is rewarded with nice fruit and plenty of it. Is it anything but neglect that causes the failure? E. B.

Pharsalia, N. Y., Jan'y, 1858.

CULTIVATION OF DWARF PEARS.

There is very little to be said, that is new, on the cultivation of the Dwarf Pear; but as in morals and religion, so in horticulture, we need "line upon line and precept upon precept." The true secret of the many failures in the cultivation of the pear upon the quince stock, is the neglect of the information which those more experienced have from time to time given through the press, and the disregard of those common and more obvious principles of vegetable physiology which every cultivator at this day ought to understand. There is really no more difficulty in making a dwarf pear tree grow than there is an apple or a peach tree. The appropriate soil and culture is needed in the one case just as much as in the other.

It should be remembered that the pear is not dwarfed for the profit of the thing so much as for promoting the early fruitfulness of the tree, and for the very limited space required for its growth. These are the primary considerations. In some cases, or rather with some varieties, the quality of the fruit is no doubt improved; but, as a general rule, quite as good fruit may be got from standard as from dwarf trees.

To cultivate dwarf pears successfully, the soil must be rich. It may be clay, or it may be a light or a strong loam; but if not already rich, it must be made so. There is no fruit tree that will bear so high cultivation as this. The ground should be well prepared before planting, by deep plowing or digging; and by deep and thorough draining, if at all wet. The finest and most productive trees that I

have ever seen, were planted upon a rich loam with a stiff clay subsoil, trenched two spades deep, and thoroughly manured with stable manure in the process of trenching. The roots of the quince do not extend far from the stock—in most cases not more than three or four feet,—but they are exceedingly fibrous, and require a great deal of food, to supply the stronger and more luxuriant growth of the pear. The trees may be planted eight feet apart. Some plant six or seven feet apart, but most persons prefer the greater distance. Care should be taken in planting, that the stock as well as the roots of the quince is covered with earth. The trees should be planted so that the point of union between the pear and quince be at least even with the surface. Deeper planting has the sanction of respectable authority, but I have yet to learn that the practice is supported by any experience which will justify its adoption.

The trees should be well manured every year. The best manure for this purpose is stable manure, well decomposed; and this should be applied and well mixed with the earth, late in the fall or early in the spring. I gave my trees, last spring, a mulching of stable manure, two years old, about three inches deep over a space of four feet around each tree, and covered that with a mulching of straw. I found the growth and fruitfulness of the trees much increased by it. I have sometimes used a slight dressing of guano, forked into the earth about the roots, with excellent effect. A thick mulching of straw or other light material is almost as important as manure. It is an error to suppose that a crop of vegetables may be grown between the rows without injury to the trees. It is far better, in my judgment, to give up the ground wholly to the pear trees; and then, if the earth is kept well stirred and free from weeds, by a liberal use of the hoe or the cultivator during the season of growth, a greater profit will be realized.

The varieties best adapted to the quince, so far as my observation enables me to judge, are, for Summer Pears, the *Doyenné d' Eté, Beurré Giffart*, and *Brandywine;* for Autumn Pears, the *Louise Bonne de Jersey, Duchesse d' Angoulême, Beurré d' Anjou, Beurré Diel*, and *White Doyenné';* and for Winter Pears, the *Glout Morceau, Easter Beurre*, and *Lawrence.*

The operation of thinning the fruit is too often neglected, especially by the inexperienced. When a dwarf tree is well established, it will set twice or three times as much fruit as ought to be suffered to mature. After the fruit has become fairly set in the spring, it should be thinned by cutting or pinching out the smaller and imperfect fruit, and leaving the rest equally distributed over the tree and upon the different branches. This is quite a delicate operation, and like pruning, to become perfect in it, requires much observation and experience. If too much fruit is left to grow, the specimens will be small and sometimes without flavor, and the tree will be stinted and exhausted. The quantity to be left must depend very much upon the age and vigor of the tree.—I have known a bushel and more of fine, large specimens, grown upon a *Duchesse d' Angoulême* and upon a *Louise Bonne de Jersey* eight or ten years old, without injury to the tree; but this I consider a large crop. If trees of that age average a half-bushel of perfect fruit, the cultivator ought to be satisfied.

Y. Z.

CULTURE OF GRAPES IN THE OPEN AIR.

Though not professing to be an adept at Grape growing, but only an amateur, I have been induced to offer myself as a competitor for the prize offered on this subject, thinking that a majority of the readers of the *Farmer* needed more that information that would teach or induce them to put out, train, and prune a few vines for domestic use, than a full and complete system for the management of a vineyard. And as I am compelled in the stipulation to be brief, I shall only offer a few hints, calculated to induce those who have a home of their own, whether a farm or only a garden, or even a yard, to put out one or more vines, as they have space and means, as a most economical, agreeable, and beautiful manner of occupying a spare nook and corner of the premises.

Most of the directions in books and journals commence by recommending that the ground, if not dry, be thoroughly drained, a southern or eastern inclination, deeply plowed, spaded, or subsoiled, and highly manured with this that or the other compost. These seeming requirements at the start, I doubt not have detered thousands from enjoying an economical, delicious, ornamental, and easily raised fruit, liable comparatively to few enemies, maladies, and mishaps. I do not object to the above recommendations, as by any means improper, but as far as my experience and observation extend, they are no more applicable to the culture of the Grape, than to that of most other fruits, vegetables, and field crops. I have an *Isabella*, partially shaded by a building, set in dampish ground, never spaded, plowed or manured, except by an occasional splash with suds, which grows vigorously, bears well, and is a beautiful spectacle. Some of as fine *Isabellas* as I ever saw were grown under the same circumstances as to soil and culture, and the vine trained on the north side of a barn, where the sun never saw it after 9 A. M., and I have this day visited a vineyard of 100 *Isabella* vines on the north side of an old apple orchard, and with the ground descending to the north, the Grapes from which were this season sold in Buffalo at the highest price, in competion with those of the same kind from one of the most popular vineyards in Western New York.

Now, I am far from wishing to encourage carelessness, slovenliness, or laziness in Horticulture, Agriculture, or anything else. I doubt not that the vines mentioned would have paid well for better ground and better culture; but I would say to all who can, put out some vines, give them the best place and the best attention you can consistently with your other duties. The recommendations here quoted are good, but don't neglect planting because you can't comply with the whole list. Give them as good care as you do your corn, potatoes and wheat, and I am sure you will never regret having planted them.

The roots of the Grape run very near the surface, and you can not dig to much depth over them without cutting them; therefore it is best to fix the ground beforehand, in a manner to keep it permanently light. Some say dig a deep, broad hole, and fill in stones, shells, bricks, and bones. This is good as far it goes, and I say put in your old boots and shoes, too; but don't dig a pit to hold water; better to dig a hole only big enough for the roots, unless you can drain off the surplus water,—

The vines want something to run on; but unless you are rich and have other ornamental work to match, don't employ a joiner to make a planed and painted arbor, it is bad taste and poor economy; the best trellis for the cost, is posts 6 or 7 feet high, with a narrow board on the top, to keep the posts in place, and 3 or 4 wires stretched horizontally below. To promote vigorous growth and early bearing, cut back in the fall or winter the first year's growth to one shoot of about a foot in length; let two branches grow from this the next year, training them horizontally each way, and pulling off all the laterls. Cut back the next winter according to the vigor and size; and the next summer let branches grow perpendicularly, 16 to 18 inches apart, to the top of the trellis, and then cut them off. This season you may expect a few grapes, and for further instructions for pruning and training, consult the *Genesee Farmer*, *Rural Annual*, and common sense.

Don't pick your grapes before they are ripe, as most "new beginners" do. There are many who have raised a few for years, and know nothing of the flavor of a ripe grape. Don't pluck off the leaves—that will retard the ripening, and injure the flavor. Nature turns up the broad leaf to the sun, but hides the fruit in the shade behind it. In this respect it differs materially from tree fruit. Do not be afraid of raising a surplus; they cost you less than almost any other fruit; you can make pies of them while green—jellies, jams, preserves, sauces and wine, when ripe; can dry them in sugar, or by hanging them up by the stems; or, you can preserve them pretty fresh for eating till February, by packing (on the stems) dry and cool in cotton or paper. As to the best kinds to raise, go to the Fairs and consult the exhibitors, read books and papers, and taste the fruit when you can honestly; but do not rely mainly on the puffs of new varieties sold at fancy prices. As to manures, if the land is in good heart, I should not manure very highly, for I think it promotes the growth of vines rather than fruit. Barn-yard manure and ashes I think are good, especially the latter, and I see no objection to any of the composts recommended.

Gorham, N. Y., Jan'y, 1858,

CULTURE OF ASPARAGUS.

To raise asparagus from seed, sow it in autumn or early spring, in a good garden soil. Take ripe berries and put them in warm water; they will soon begin to ferment; then the seed can readily be washed from the pulp and dried. (Cucumber seed is most conveniently cleaned in the same way.) Sow in drills an inch deep and ten inches apart; cover with mellow earth, and press down lightly. Cultivate frequedtly and cleanly, and thin out the plants to ten inches apart in the drills. The second year select the best plants to form the bed.

In situation, the Asparagus bed should be open to the morning sun, and protected from the north and west winds by a low wall or fence, if it may be conveniently. It must not be shaded, as it needs free light and air. It should be *rich*, this is a necessity of the plant, if any valuable product is desired. Dig up a loamy, porous soil, thirty inches or three feet deep, intermix largely and thoroughly with good stable manure, to within six inches of the surface—fill this space with good garden mould. Then set out the young plants in rows, two feet apart, and one foot apart in the row. Do this carefully, preserving all the small roots possible. Cover now the whole bed with decomposed muck, or any rich black earth, about two inches deep, and then sprinkle on salt enough to whiten the surface. This will keep down the weeds, and is needed by the Asparagus, which is a native of the sea-side—although a plant of very different habit, while uncultivated by man.

Remove the dead stalks in autumn, and cover the bed three inches deep with stable manure. This will protect the roots in winter, and cause them to start earlier. It should be forked in, in spring, taking care not to injure the plants, and another dressing of salt applied. Cut none, or very few, of the stalks until the third year—the plants will then be well established, and will yield a supply of large good stalks, continuing to do so for years, if manured every fall and spring as above directed. Cut all, or nearly all, the shoots while cutting the bed, and only just below the surface of the ground—only the green par is fit for eating.

Sufficient room, both in depth and breadth, a rich warm soil, and salt enough to keep down the weeds, are necessities of the Asparagus bed.

January, 1858. J. H. R.

CULTIVATION OF THE RHUBARB.

Rhubarb is a hardy perrennial from Asia and Tartary, cultivated for the petioles of the root-leaves, which are used for tarts, pies, and sance. Of late, its cultivation has been rapidly extending, furnishing, as it does, excellent material for pies and sauce, at a season when fruit cannot easily be obtained. Any family having a few rods of ground to cultivate, can have an abundant and never-failing supply of this wholesome vegetable, by observing the following directions:

Soil.—If possible, select a sandy or gravelly loam.

Preparation.—Trench it three spits deep, on no account neglect to do this. Fill the trench with well-rotted horse manure, thoroughly mixed with the top of the soil.

Size of the Plantation.—Let the number of plants you put out be determined by the size of your family. A bed three feet wide and twenty-five feet long, will abundantly supply a large family. It will admit of a single row, with the larger kinds, at five feet apart, and the smaller kinds at three.

Varieties.—*Mitchell's Early Albert.*—The earliest sort cultivated; of good size, fine flavor, and tender throughout the season.

Tobolsk.—This is an early variety, but compared with the larger sorts, is small; its flavor, however, is excellent.

Myatt's Victoria is, perhaps, the most popular variety grown; it is large, and highly flavored.

Our experience is limited to the above varieties. There is a new variety called *Cahoon's Mammoth Seedling*, which is reputed to grow enormously large; but we are inclined to think that it is not so rich and highly flavored as *Myatt's Victoria.*

You can raise your own plants, if desirable, from the seed; but you can have no assurance as to the kinds, as seeds will *never* produce the varieties of the plants from which they are taken.

January, 1858. F.

CULTIVATION OF TOMATOES.

Having been very successful in raising tomatoes for market a few years ago, I thought myself capable of writing a few useful lines to the novice in tomato culture; but in attempting to do so I find I have forgotten many of the small matters that cost me much thought, time, practice and labor to learn. As late tomatoes grow freely without much cultivation, I shall confine myself entirely to the extra early crop. For a market crop select your ground lying as warm as possible; if protected on the north and west by woods so much the better; and be very careful to choose ground not subject to late frosts, such as dishing ground between hills and high ridges; such spots often suffer from frost when higher ground escapes.

By the month of February cast on the ground a mixture of horse, hog, cow and sheep manure, if you have them, at the rate of ten large two-horse loads per acre, for your compost heap; if the ground is open, cart on this the same bulk of rich earth—in this section marl is used. As soon as frost is out in the spring, cut this compost carefully over, heaping up three or four feet high. It is very necessary to have this compost thoroughly rotted, consequently it will sometimes be necessary to work it over the second time before the 1st of May. If your soil is heavy, plow and work it in dry weather, so as to bring it to as fine condition as possible; but warm sandy ground will prove much earlier.

About the tenth of May mark out your ground with a plow, four feet each way; then with a hoe dig out the hills, or the place for them, down to the yellow earth, full fifteen inches in diameter. If you can procure it easily, scatter a table spoonful of Peruvian guano in the bottom of each hill; immediately put in your compost, the quantity so that your ground will just use up your compost; then with a hoe cover your manure at least six inches deep, making you hills large and high.

The most expense in raising early tomatoes consists in the management of the plants before they are set out in the open ground. If you are near a good market it will pay to expend some capital in hot-bed fixtures. Procure good sash and frames, and as many pint pots as you wish to raise plants. But if you are near a pottery you had better order your pots made five inches deep, and four inches wide, inside measure. If I recollect, a sash six feet by three covered 120 pots. Your sash, pots, mats, and frames ready, about the 15th of February dig a pit two feet deep as large as four sash; fill this with fresh stable manure, packed pretty solid so as to hold heat longer, cover this with six inches of rich soil; place on your sash, and mats at night; in three or four sunny days your bed will be ready for the seed. Make small drills for the seed four inches apart; sow your seed thickly—the large smooth is the best market kind—cover near one inch deep. In five or six days if your bed is in good condition, they will be bursting through the ground. If the weather is moderate, give air each sunny day by opening the sash at the top. When about two inches high, thin out to one inch apart. Be careful not to let your plants grow too fast—six inches by the first of April is as large as they should be; aim at having your plants stout—avoid spindling plants. About the 20th of March pile the earth on each side of your plants about four inches high, which will cause them to throw out new roots. About the last of March prepare your bed for hardening large enough to hold all your pots; have ready enough rich mould to fill your pots. In this second bed, your manure need not be over one foot thick; after your manure is in, fill your pots with the prepared earth; place them as close as possible in your bed; fill up all space between the pots with loose earth; place on your sash, and if the nights are cool put on mats. As soon as you find any heat in the pots from the manure, begin your transplanting from the seed bed to the pots, putting one plant in each, placing them in deeply. Water with warm water; shade from the sun two or three days, and if much heat rises from the manure, air freely in all moderate weather.

Your plants will need constant care to keep them growing just right; if too warm they will grow tall and spindling; keep them well wet. Your dirt in the pots will settle much by wetting, and be apt to bake from the heat of the sun; to prevent baking fill your pots up with sand; this will keep the rich earth under moist, and the water will soak in better when you wet the plants.

Make it your aim now to have your plants very hardy by exposing them to all the air possible, without entirely checking their growth. By having your plants thus wide in the beds, they will branch much better than if left thick, and the branches will often ripen fruit within a few days of the main stalk. If your bed and plants have been well managed, so as to cause a stout, stocky growth, four plants may be allowed to reach ten or twelve inches high by the first of May, and they should begin to show the buds pretty freely. After this time remove the sash each day, that the plants may become used to the natural air; but if the weather gets very warm, don't be in a hurry to get your plants in the open ground. I have known a very fine patch very much injured by frost after the 12th of May. If your plants are in pots never set them in the open ground before the 20th of May. As that time draws near, you may leave the sash off at night, if you are sure there will be no frost. Keep your beds well wet before the time of setting out; much depends on this; if the dirt on the pots is dry and crumbly when you transplant, and the weather should be and continue dry, many of your earliest buds will blast and set no fruit. About the 20th of May choose a wet or damp, cloudy day if possible, to put out your plants. But if your dirt is well wet in the pots, they may be set out in the middle of a very hot day without wilting in the least, if done by a careful person; if it continues dry many of the buds will blast. It is best if you have it, to use a spring wagon, and if your patch is near your beds, only cart one tier at once; but if at a distance, cart a double tier.

In setting out, let one or two hands cart them, and one set them; let the carters lay them pot and all by the hills, the pot on the side; the person setting out will learn to remove the plant, dirt and all, from the pots with little trouble; dig a deep hole in the hill with the hand, take the pot in the right hand, give it a smart slap on the left, then holding it over the hole, take the plant gently by the right thumb and fingers, pull gently, let the dirt and roots all in a solid ball, drop in the hole; pull the dirt well up around the plant with the hand, and it is done. No sticks or tieing up is necessary if your plants have been rightly managed.

The after culture is very easy and simple. About one ploughing and hoeing is all that will generally be needed. Some recommend cutting the tops off to cause them to ripen early. I do not; I have tried it over and over and never saw any advantage; but let each person try it to satisfy himself. If all has thus far been well managed, by June 1st the plants will have on from one to nine tomatoes on each hill, from the size of a large pin-head to a hazlenut. By this course of management I have succeeded in picking three baskets for market on the 4th day of July; and as it has often been my aim in what I undertook to go ahead of all competitors, so in this I succeeded in beating any thing north of Virginia two weeks. One season I took my first ones in New York market on the same day that the first lot of any size arrived from Norfolk, Va. From one hundred and fifty to two hundred and fifty dollars per acre is a good yield. Your pots and sash will last with care many years, but neglect and carelessness must not once be thought of. Any person wishing to raise market tomatoes with less expense, may easily do so, but must be satisfied with less profit. Remember "any thing worth doing at all is worth doing well" J. C. TAYLOR.

Holmdel, N. J., Jan'y, 1858.

CULTIVATION OF TOMATOES.

START in a hot-bed in March or April. When the plants are three to four inches high, transplant into other frames, (under glass or cotton,) from three inches to a foot apart. Be governed as to distance by the length of time they are to remain in the frame, and the size of plant you wish to grow; but avoid *crowding*. Give air freely, whenever the weather will admit, to harden the plants previous to their removal to the open ground.—About the first of June, in this locality, transplant in rows five feet apart each way.

My method is as follows: Cut with a long-bladed knife the dirt between the rows of plants each way, to the depth of six or eight inches. *Then, with a trowel or sharp spade, carefully take up each plant with as large a ball of earth as possible.* Do not trust their removal to careless hands. With a hoe, dig holes three inches deep; set in the plants with earth attached, and finish by hilling up, making large hills. If the work has been well done, the plants will scarcely wilt under a hot sun. By this method, the roots are brought near the surface, to receive the influence of the sun. The fruit is also well exposed to the sun, and my little mounds of tomatoes are not "forever and the day after" in ripening. No watering is necessary, except a little in the holes before transplanting, and then only in a dry time.

Tomato plants may be grown very well in crocks or boxes in the kitchen window; and inverted sods, nicely cut into squares, and then placed in a shallow box, make an *excellent substitute for crocks*, especially in these hard times. The plants thus grown should be set out of doors a few days to harden, previous to transplanting, taking care to cover cold nights.

Triming off a portion of the side branches close to main stem, will produce larger and finer fruit.

Tomatoes give the greatest yield on a rich soil, but do not ripen fruit so soon as when grown on a poorer one. W. C. P.

Erie Co., N. Y., Feb'y, 1858.

CULTIVATION OF CABBAGE.

THE Cabbage is a plant that requires rich and well cultivated ground. There is no vegetable which is more influenced by careful and thorough cultivation and plentiful manuring, than the Cabbage. In fact, the success of the crop depends almost entirely upon the treatment it receives. It is a frequent complaint, among farmers, that their Cabbages will not head, but grow with long stalks and small heads, or none at all. The failure is generally thought to be produced by the season being too wet or too dry, or else the seed was poor; but in almost every instance, want of care in preparing the ground, and in after culture, was the main cause of the failure.

The two following methods have generally produced good crops, either are good:

Early in spring, sow your seed in a warm border, after thoroughly mixing some well-rotted manure with the soil, and making it smooth and fine. If insect depredators attack them, sift ashes or lime over the young plants; for, besides keeping away the insects, the ashes will make the plants grow nicely.

Having got the ground ready where the plants are to stand, it must be well manured and mellow; dig as many holes as you wish to set plants; in each hole place a shovel full of manure, and cover it with soil, thereby filling the hole even with the surface of the ground; then remove the plants from their bed, be careful to remove as much earth as convenient with the roots. It is best to remove them on a cloudy day, or just at night. Pressing the soil firmly around the roots, after they are transplanted, and water for a few days if the weather is warm and dry. The plants should be set in rows, three feet apart, and two feet apart in the rows. After the plants are firmly rooted, and commence growing finely, the soil should be kept clean of weeds, and frequently stirred around the plants. Some farmers even make it a practice to hoe their cabbages every other day during the commencement of their growth; and when time will permit, it is none too often.

The other method is to carefully prepare the ground as early in spring as possible; dig holes as before, in rows three feet apart, and two feet apart in the row; fill the hole with manure; cover with soil, and plant on the surface, three seeds in a hill, and cover an inch in depth. Let them grow until the plants are three inches in height, then remove the smallest to some other place, or they may be wanted to fill vacancies. The cultivation should be the same as in the other method. By sowing the seed where the plants are to stand, it saves transplanting, which of a necessity checks the growth of the young plants.

Liquid manure is excellent for cabbages, and ashes tend to make them grow thriftily; and when the plants are small, it is an object to force them forward as fast as possible beyond the reach of insects, that sometimes destroy the best efforts of the farmer, and the crop proves a failure; but with liberal manuring, good cultivation, and proper soil, and a watchful eye on the young plants, a good crop is almost certain. For the farmer who cultivates only for the use of his family, the above

methods are as good as can be produced; or, at least after careful experiments in different ways, they have proved so to the writer. E. B.

Pharsalia, N. Y., Jan'y, 1858.

WATERMELONS.

Select a dry soil; dig holes three feet in diameter, eighteen inches deep, and twelve feet apart. Fill half full with any rich compost—the combined deposits of the horse, cow, and pig, well composted with garden rubbish *will do*, in the absence of any of the "patent" hum—— manures. Pour in a pail of water; fill with any good rich garden soil. Cover the latter with about an inch of well rotted manure. Plant seeds in the manure; and remember in planting that *you* want *three plants. The cut-worms will want three or four, and the yellow or striped bugs twice as many as the cut worms.*

Cover the manure with an inch of fine sand. When the plants have made from four to six rough leaves, scrape away the sand and replace with good garden soil. Also, at this time, pinch off the centre shoot, which will cause the vine to spur, and bear fruit earlier. Allow but three or four mellons to each plant; and if you wish to grow one weighing from twenty-five to thirty pounds, give it the benefit of the entire plant. Choice seed should be started within a small frame, say six to eight inches high and a foot square, set over the hill above described. If covered with a light of glass, all the better. By this means, and ordinary care, nearly every seed will produce a plant, and they will be from a week to ten days in advance of those grown in the open air. W. C. P.

Erie Co., N. Y., Jan'y, 1858.

MAKING AND PRESERVING FEATHER BEDS.

When feathers are picked from the geese, they should immediately be put into sacks made of common sheeting, of sufficient dimensions to allow them room to dry if they are not entirely ripe, and aired occasionally between pickings by being laid out in a warm sun. When about twenty pounds are collected, (which will make a very good bed when the feathers are new,) make a tick of the best ticking that can be obtained. If it is very thick, so as to exclude the air too much, a goose-quill an inch and a half long and open at each end may be sewed in each corner to let in more air; then put the feathers in and sew it up.

If the bed is designed for immediate and constant use it should be well shook and aired every day; if for an "extra" or "spare bed," it should be slept upon occasionally and aired frequently, until that "goosy odor" which always arises from new feathers has entirely evaporated. Feather beds should never be suffered to lie any length of time under heavy clothing when not in use, as they will exclude the air from the feathers, which is as necessary to their life as it is to the lungs of the fowl that produced them. A pair of sheets and a thin spread or counterpaine, (always of cotton or linen,) or enough to secure the tick from being soiled by dust, is all that should be used as a constant covering. They should always be kept in dry rooms, and have the windows frequently opened on dry windy days.

When feather beds are laid aside for the summer, as is usual in many families, they should never be stowed away, one upon another, in some dark closet or back chamber, there to lie uncared for and unaired until cold weather calls them again into use. If you have good beds, *nice* and *clean*, as every good farmer should have, you had far better suffer the inconvenience of having them lie *singly* upon the carpet in the *front chamber*, where you can air and turn them over occasionally, and have them improving in condition instead of growing worse.

Beds that are partly worn and are becoming lank, may be restored to nearly their first value, or be made to answer to the name of full beds by the addition of a few pounds of new feathers. What we call full beds are those weighing from twenty-five to thirty pounds.

Feather beds made and taken care of in this way will be *nice* and *new* for many years.

A FARMER'S DAUGHTER.

Madison, Lake Co., O., Jan'y, 1858.

DOMESTIC DUTIES.

"How can Mothers best instil into the minds of their Daughters a love for Domestic Duties?"

The education of girls in domestic affairs may be commenced at a very tender age. They should be allowed to do little chores about the house as soon as they are capable of doing them. We say allowed to do them, because every mother knows that little girls feel quite important when they can assist in setting the table by putting around the knives and forks, wiping some of the dishes, picking up things about the kitchen, putting the chairs in their proper places, etc. If properly taught and encouraged they will very soon do their little work neatly and expeditiously, and make the inquiry, "What shall I do now, Ma?" But we must not overdo the matter by asking too much of them while very young, or what was considered a pastime will be thought of with dread and performed with reluctance.

In the meantime we should attend to the cultivation of the intellect; for we may as reasonably expect to train up a vine without the support which its nature requires, as to teach a girl whose mind has been neglected, to love the duties she should be expected to perform. Mothers should ever bear in mind that there is a material difference between teaching a daughter to perform domestic duties and teaching her to love those duties. The former is the kind of teaching adapted to animals low in the scale of intellect. It requires a mere physical performance, without the aid or the exercise of mental faculties. The latter is a higher order of teaching, and brings into action some of the noblest attributes of the human mind. It appeals to the tenderest of feelings—love. What daughter or sister who loves her father and her brothers will not take delight in performing her part well, knowing that thereby she is contributing to their comfort and raising herself in their esteem.

Girls should early be taught that there can be no true greatness without labor, and that physical labor is necessary to the proper development of both mind and body; also that they will be esteemed in society not according to the number of showy dresses they possess, nor the manner in which they perform on the piano or chatter French; but according to the manner in which they perform those duties which naturally and necessarily devolve upon their sex.

Schoharie, N. Y., Jan'y, 1858. A FARMER'S WIFE.

PERSONAL HABITS AT HOME.

"How can Farmers' Wives and Daughters induce their Husbands, Sons, and Brothers, to be clean and neat in the house, in their persons and habits?"

I AM aware that in some families this looks like a herculean task; yet much may be done, even where the want of neatness is sadly apparent. In the first place ladies should not consider any part of their house too nice for use, and wherever the ladies sitting-room is, there the husband, sons, and brothers, should be welcome. We will take a farmer's family for an example, and suppose they have room in their house for comfort and elegance. Of course the parlor is not to be the common living room; but there is a nicely carpeted, airy sitting room, where the ladies can sit down after their morning work is done, and read or sew, and where the quiet knitting work is always convenient.

We will suppose the husband, brothers, and sons, come in tired, warm, and *soiled*, to dinner. Now is the time to begin the reform, if any is needed. Have ready cool water, towels, and combs, *in the shade*, and they will not want much urging to use them. Then a clean light roundabout, linen coat, or something *cool*, to put on while eating, makes them *feel* and *look* fit to sit down at the table. After dinner, if they find kind efforts are made to have them rest on the lounge or the arm chairs, they will return the kind feeling by avoiding any unnecessary soiling of these comfortable resting places. There may be exceptions, but I think this would be the general feeling.

If there is company at tea, let the husband, brothers and sons, as many as convenient, be called in and furnished with whatever is necessary to make their dress pleasant to sit at the table or in the parlor. I have sometimes visited where the gentlemen were not invited to the tea table with the ladies. I never feel more than half welcome, where this is practiced.

At night, let conveniences for bathing or washing be ready, and let the family sit down together in reading, singing, or in some intellectual conversation. Is it probable that with such a system a family will wish to be slovenly? I think not, A different mode of treatment has caused this evil in many families. When members of a family are driven to the kitchen because they are not clean enough to sit with the ladies, or in the parlor, what wonder if they become careless and slovenly? If, as some people think, coarseness and vulgarity flourish in the kitchen, then bring all the members of the family into the sitting room or parlor, so that refinement and intelligence may thrive in their stead, and all will be not only neater but happier. A. M.

HOW TO MAKE HOME ATTRACTIVE.

How can the Sisters of the Farmers' Sons of our country induce their Brothers to be neat and tidy in their habits, courteous and polite in their manners, and contribute best to their comfort at home?*

THE ways in which the sisters of our country might exert a beneficial influence over their brothers are very numerous. In the first place set them the example, for you seldom see young men when grown up to manhood either slovenly in appearance or manners who in their childhood had a sister who made them her pride, and delighted to see them neat and tidy at all times.

How can it be expected that our brothers can be induced to keep themselves respectable, if we as sisters do not; or if on their wishing to go from home, etc., find the buttons off their shirts, or perhaps their colars unironed, or if ironed at all done in a very careless, untidy manner, and their whole wardrobe in a state of confusion. Would it not contribute greatly to their happiness if sisters would devote a small portion of time every week to looking after these small but important items of comfort. How many mothers are at this present time lamenting with parental sorrow the departure from home of a beloved son, in search of, as he thinks, a more comfortable home; another instance in which a sister's influence and love, if properly exerted, might have prevented the brother's departure, and consequently the mother's grief. I do not wish by this to insinuate that sisters ought to have the sole command of their brothers—far from it; neither do I wish to encourage that domineering spirit so fully developed in some sisters, much to their own unhappiness, but let love be the ruling power.

Second: That they may be courteous and polite in their manners, let sisters endeavor both by precept and example to encourage a series of evening readings of good substantial well-written works, intermixed with a lively conversation on the prominent features of what has been read. This will, I think, tend to make the long winter evenings of our beloved country pass pleasantly away; for, to use the words of an English poet,

> "This books can do, nor this alone; they give
> New views to life and teach us how to live;
> They soothe the grieved, the stubborn they chastise;
> Fools they admonish, and confirm the wise:
> Their aid they yield to all; they never shun
> The man of sorrow or the wretch undone.
> Unlike the hard, the selfish, and the proud,
> They fly not sullen from the suppliant crowd,
> Nor tell to various people various things;
> But shew to subjects what they shew to kings."

How many hundreds of the young men that populate our country resort to the tavern, the bar-room, theatre, and other places of idle amusement, to spend their evenings, instead of staying at home and contributing to the rest of the family's comfort—and why? Simply because time passes away more pleasantly than at home! whereas, if mothers and sisters would endeavor to interest them either in the way before mentioned, or by occasional social or home parties of neighbors and friends, it would, I firmly believe, have a beneficial effect upon their mind, and help to make home happy. No matter how low in circumstances, or how far from society of gay and fashionable comrades, if the sister endeavors to be lady-like in her own deportment it will necessarily have a good effect. Let sisters consider these few hints, and endeavor, in former times they have been neglectful, to strive to let the time past suffice.

And lastly, that sisters may contribute to your comfort at home, I would say to the brothers for whose benefit the foregoing lines have been penned, strive to appreciate a sister's efforts for your comfort; do not dampen all her endeavors by persisting in habits which you know are contrary to her desire, but let it be your aim to "do unto others as you would that they should do unto you."

Aurora, Jan'y, 1858. A SISTER.

* A special premium is awarded to the writer of this excellent essay. The question is somewhat different from the one proposed, and it could not therefore compete with others. [COM.

TRANSACTIONS OF THE OHIO POMOLOGICAL SOCIETY FOR 1857.

At the meeting of this Society in September last, the President, A. H. Ernst, of Cincinnati,—who, by the by, is re-elected for the ensuing year,—made a valuable address, reviewing the effects of the weather during the past two years on fruit trees, and the diseases of fruit trees and their causes, and many other interesting topics, which our limited space will not admit of inserting. We give the following extracts:

"Destruction of Trees in the Winter of 1855-6.—This destruction was as remarkable as it was severe; in some instances, the same varieties, standing in close contact, and seemingly similarly situated, were differently affected, some being destroyed, while others escaped unharmed. This was especially the case with the grape, some vines of the same varieties being cut off, while the next escaped; this was more particularly observable in parallel rows, one being mostly destroyed, while its next neighbor was little harmed, so that we learned nothing of the hardiness of one variety over another."

"Mildew and Rot of the Grape.—In this connection I would especially call your attention to the mildew and rot of the grape, which proved so destructive to the crop this season, and which will, if not arrested, materially interfere with the culture of this healthful luxury. Whether this is owing to the adoption of the European method of culture and treatment by our vine-dressers, as not suited to our soil and climate, or is the result of other causes, are matters on which there is much difference of opinion, and is worthy of your serious consideration. It cannot be that in a country where the grape abounds and flourishes in a wild state, it should not also flourish in a state of cultivation, if the method of culture is correct, and not destructive to the health of the plant. The fact that varieties which were healthy, and perfected their fruit regularly and uniformly, do not do so now, or at least precariously, is certainly suggestive of something wrong in their treatment. It cannot arise from a worn out soil, from which all the substances for their healthy action have been abstracted, or they would still maintain their former healthfulness, when transferred to new soil. This is not the case; all share alike in similar soil and location. Is the plant not enfeebled in its power to produce fruit by the severe pruning to which it is subjected in our climate?"

"Consumption of Fruit.—Immense numbers of trees are annually planted, but by no means as many as the general consumption of fruit demands, which more than keeps up with the supply. Prices, in consequence, are continually on the advance, as the public are learning to appreciate the value of good fruit as a diet.

"The growth of large cities is so rapid; the facilities afforded for transporting fruits from point to point with great rapidity by railroad, which gives the cultivator a choice of markets, and the immense quantities of perishable sorts which are now being annually put up in cans for further use, all tend to an increased demand and enhancement of prices, so that they are likely to be placed beyond the reach of a large class of persons who would be consumers if prices were within their means."

A letter received from A. L. Benedict, of Morrow County, "in answer to a request for information in regard to the effect of the two past winters on the different varieties of Apples," contains a list of 73 varieties in the orchard of Mr. Benedict, of which all the trees of 17 varieties were "entirely destroyed," 31 varieties were "partially injured," and the trees of 25 varieties were "not injured, or but very slightly." Of the kinds "entirely destroyed, and those "partially injured," all bore a full or partial crop the previous season.

Of the kinds not injured, 84 per cent. of them bore a full or partial crop the previous season, and 16 per cent. were barren. The number that bore a partial crop was greater than in the other two classes. Mr. Benedict says, "it will be seen that those kinds which fruited fullest in 1855, suffered most by the frosts of the winter following."

If we can conclude from the above, that those trees that bore fruit the previous season, were thereby rendered more susceptible of injury by cold, we may infer that if all had borne alike, all would have received the same injury; thus corroborating the remarks of the President, which we have previously quoted, in reference to our ignorance of the hardiness of varieties.

Mr. J. L. Shinkle, of Brown Co., in a letter says:

"I will also state, that those trees which were loaded with fruit in the fall of '55, made but little growth, and suffered less than those that bore no fruit, and were growing thriftily."

In an interesting letter from W. C. Hampton, of Hardin Co., we find the following:

"The Sap-sucking Wood-peckers have caused more loss in fruit trees in this region than any of the severest winters. The young birds usually select the *thriftiest tree* in the orchard, and will continue to feed on the tender alburnum until the tree is destroyed, unless timely aid is rendered in the use of powder and shot; and it must be timely indeed, for a few short hours are sufficient to destroy a tree of twenty year's growth. My loss by them, in spite of my vigilance, has amounted to from $50 to $150 worth of trees yearly. Nutall says that it is not clearly understood whether this bird feeds on insects or the sap of the tree; there can be no doubt but that it feeds on the young and tender sap wood, and thus it becomes a great pest to the orchardist in wooded districts. Other wood-peckers take a portion of the fruit, but this we can spare for the services rendered by them in the destruction of worms, but we cannot so well spare thrifty and vigorous trees which we have watched and nursed for twenty years."

At the close of the volume, in summing up under the head, "What has been learned," we find, among other deductions, the following:

"As a general rule, there is not much difference in the *hardiness* of the different varieties of fruits, especially of peeches and sweet cherries; and in regard to apples, the difference is much less than was generally supposed; as many of those reported as tender in one locality, or by one writer, are classed as hardy by others. The principal exceptions seem to be in reference to the Belmont, Rhode Island Greening, E. Spitzenberg, and Roxbury Russet, which are reported as most generally injured by the winter.

"The effect of the previous crop had no perceptible influence in rendering the tree liable to injury by the winter; but more was dependent on the condition of the wood as to ripeness—those trees which, from richness and moisture of soil, made a late and luxuriant growth the season previous, were most injured by the winter. For this and other reasons, elevated or hilly lands are found most favorable for apples, as well as peaches and cherries.

"From the reports of twenty-five northern counties, to the State Board of Agriculture, giving answers to the question, 'Which are considered the best six winter apples in your County?' the vote stands as follows:

R. I. Greening	20	Roxbury Russet	16
Rambo	18	Baldwin	13
E. Spitzenberg	18	Y. Bellflower	11

The next in order were Belmont, G. Russet, Canada Red, and Newtown Pippin, from six to ten votes each."

PLANTING DWARF PEAR TREES.

Eds. Genesee Farmer.—As I am intending to plant a large number of Dwarf Pear trees this spring, I wish if possible to obtain definite and reliable information about the depth of planting them. There seems to be some diversity of opinion, among practical cultivators, on this point—one class recommending planting the tree so as to have the line of union of the quince and pear just even with the surface of the ground, and the other to have the union several inches below the surface, so that the pear may throw out roots and become independent of the quince stock. If this is the result of deep planting, the practice seems to me to be desirable, as the tree will become more permanent, grow to a greater size, and perhaps live longer. I know that it is thought by some that these qualities are not desirable—that the object of cultivating on the quince stock is to dwarf the tree, and thus enable us to have a number of trees of different varieties in a small space, and to make them manageable to prune and to admit of easily gathering the fruit. But by deep planting we have all the advantage of the dwarf tree in *early bearing*, and for several years that of *close planting;* and if the tree throws out roots from itself, and grows to a greater size, we can well afford to cut out every other one, or more, and then gain much by the change of conditions. Will planting the quince stock deep, in good soil, in any way injure it? I have heard that if planted deep, they would soon die; but I am inclined to think this will only occur in wet, cold soils, where of course deep planting should not be practised; but if the soil is light, and in good condition, from what I know of the nature of the quince stock, I am inclined to think that it would throw out roots the whole of its length, and not be injured by a depth of a foot, or even more, in a good dry soil. The way that dwarf trees are propagated in the nurseries, by working the stocks two or three inches above the surface of the ground, does not require them to be planted much over a foot in depth to have the pear stock three or four inches below the surface. If the effects mentioned above, follow deep planting, the question how deep shall dwarf pear trees be planted, is one of great importance when so many are engaged at the present time in starting pear orchards. If enough is known about this subject, I hope the information may be disseminated, and this point satisfactorily decided. A. H. L.

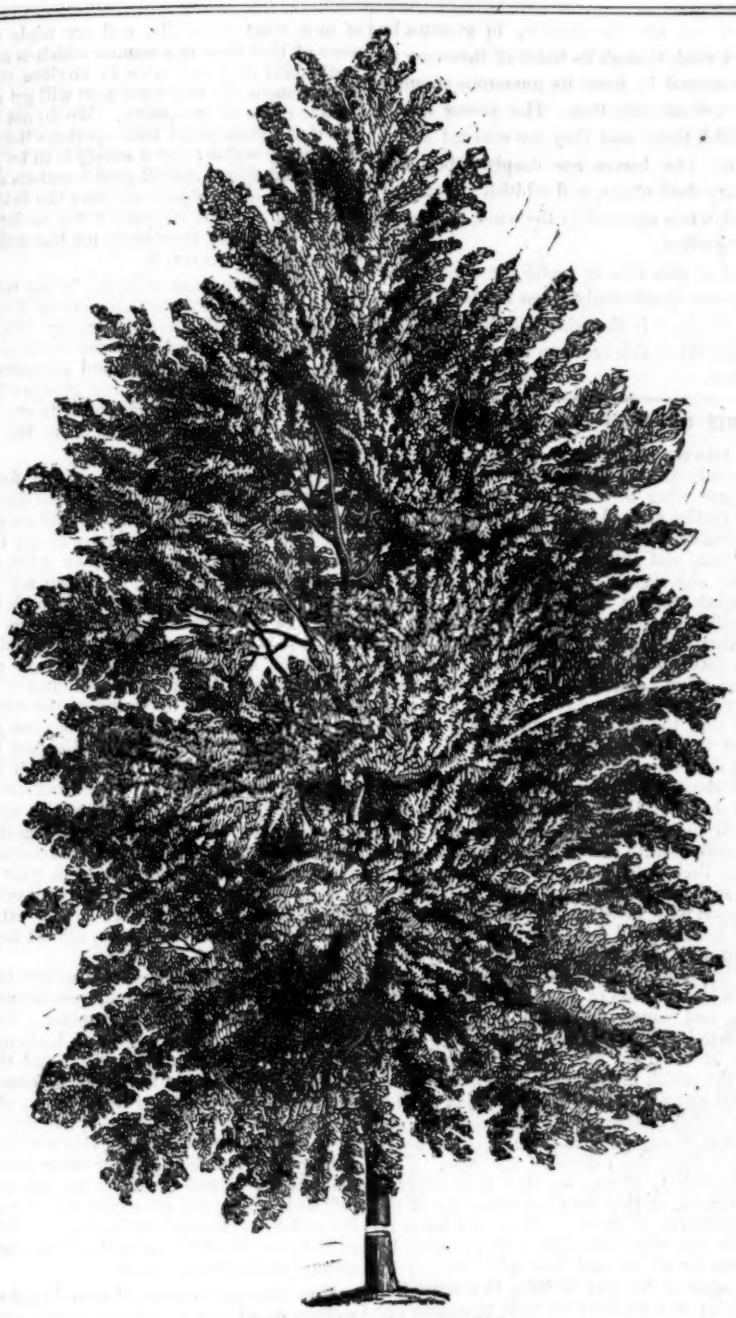
Orleans Co., N. Y.

THE WHITE POPLAR OR ABELE TREE.

There is no question better deserving the attention of horticulturists, in many sections of the United States and Canada, than "How can we best provide shelter for fruit trees?" The influence of a belt of trees, of a hill, or even of a tight board fence, in breaking off cold winds, and ameliorating the severity of our winter and spring frosts, is becoming better understood; and the day is not far distant when, by means of artificial shelter, the tenderer kinds of fruit trees will be successfully raised in sections where their cultivation is now attended with great difficulty, and where the best managed orchards produce such precarious crops as to lead many to give up all hope of obtaining adequate compensation for their labors.

There is perhaps no tree better adapted for planting in belts on the north and northwest sides of orchards, for the purpose of breaking the severity of these cutting winds, than the White or Silver-Leaved Poplar. It grows with astonishing rapidity; and from its habit of throwing up suckers, it soon forms a dense mass of undergrowth, which makes a most admirable screen. It is stated in the *Dictionnaire des Eaux et Forêts*, that a tree planted in a field, and surrounded by a fence at twenty-five feet distant from it on every side, formed by its suckers, in twenty years, a circular clump of wood fifty feet in diameter; and that consequently thirty or forty trees would cover an acre with a thick wood in the same length of time. This habit of throwing up suckers is an objection to the White Poplar, when planted in grounds for ornamental purposes, but it is a decided advantage in forming a screen. When once introduced into woods, especially where the soil is moist and loamy, it forms a perpetual succession of young trees, however frequently these may be cut down. The stools, however, decay after they have borne three or four crops of poles.

As a proof of the rapidity of the growth of the Abele tree, Evelyn mentions one of these trees at



WHITE POPLAR OR ABELE TREE.

Byron, "which, being lopped in February, 1651, did, by the end of October, 1852, produce branches as big as a man's wrist, and seventeen feet in height." As a general rule, the Abele, when planted in a soil moderately good and moist, will in ten years attain the height of twenty feet or upwards, with a trunk from six to nine inches in diameter.

The common Abele tree, (*Populus alba acerifolia,*) of which we annex a beautiful engraving, is not only well adapted for planting in belts to pro-

vide shelter, but also for planting in avenues by the side of a road, though its habit of throwing up suckers all around it, from its numerous creeping roots, is a serious objection. The young shoots have a purplish tinge, and they are covered with a white down. The leaves are deeply lobed and indented, very dark above, and whitish and downy beneath, and, when agitated by the wind, produce a very pleasing effect.

The wood of this tree is useful for a variety of minor purposes, particularly when lightness either of weight or color is thought desirable. On the prairies at the West, this tree can not be too extensively planted.

FRUIT GROWERS AND SOCIETIES.

Editors Genesee Farmer:—It is pretty generally conceded, that societies which have for their object the gathering of facts, and the dissemination of the truths arrived at by the comparison of facts thus obtained, are very beneficial, if conducted with discretion, and with a single purpose to accomplish the objects of their formation, without regard to what manner the truths arrived at may affect the selfish interests of any or all of its members; and they are able to accomplish much which individual effort can never do. We think the value of *associated* effort, as compared with *individual*, is not undervalued in this day. On the contrary, we believe that the reverse is true, and that individual effort is not sufficiently appreciated. But we still find that, mingled with the confidence which the mass of the people have in the *power* of these societies to do good, there is a very prevalent distrust of their motives, and a hesitation on the part of many about casting in their lot with them, and contributing their information to the general fund, lest they too be suspected of sinister designs, and become classed with those who have told what they knew in all honesty, and were met with reserve and concealment by those who had profited by their experience but selfishly withheld their own. Added to these, we have a class of men, who, being selfish themselves, and conscious of no better motives, have no faith in human disinterestedness, and accordingly look at once for the foundation of every society, in the selfish interests of some man or class of men. Of course, these men never fail of finding a sufficient selfish motive for all these societies, and conclude that, if any good is done, it is accidental or inevitable from the nature of the case. They will join the society if they see that their interests will be advanced, or that they can make use of the society themselves to do so. Now, we have no quarrel with the man who wishes to promote his own interests by all fair and honorable means; for he is the keeper of his own welfare, in a sense that no one else is; and we have no right to accuse him of selfishness, if he advance his own welfare only by those means which are certain to promote the general good.

Societies which have for their object those things which promote the general welfare, should therefore be sustained and encouraged, even though they may and do promote the interests of a particular class of men most especially, and are made use of by some of that class in a manner which is not strictly justifiable; it is not wise to sacrifice the general advancement, for fear some man will get more than his due share of prosperity. We do not ignore the fact that a great many men—perhaps the mass—are thoroughly selfish; but a *society* is to be judged by its avowed *objects*, and all good members should aim to advance those objects or leave the field to those who will. If the objects of the society are not selfish, but good; then let us not blame the society, but those who pervert it.

We are led to these remarks by the recent meeting of the Fruit Growers' Society of Western New York, held in Rochester, January 7th, 1858,—a meeting characterised by some features which we think call for remonstrance and amendment, while at the same time they do not give good cause for severe censure or complaint towards any, much less for discouragement or doubts as to the usefulness of this flourishing society.

The object of this society, as set forth in the constitution, is "the advancement of the Science of Pomology, and the art of Fruit Culture generally."

Judged by this clause, who will say that this is not a commendable society; or what farmer, or nurseryman, or gardener, or citizen who owns a lot of half an acre in any of our villages, is there, who would not be most happy to give one dollar per annum to be in possession of the accumulated information of all the best practical fruit growers in Western New York? the experience of 100 members of this society, upon any of the subjects coming under their observation during one year, is the experience of a century of *individual* life. How vast, then, is the sum of experience, if the society be largely extended, and *one thousand* careful observers and intelligent cultivators can be summoned at the call of our President to come together and for our mutual benefit offer each his tribute of annual observation. The progress of a year may thus become the progress of an age, or a century; and the good done to the race, by the extension and advancement of these objects, almost beyond computation.

Theoretically, therefore, this society is admirably calculated to do good; but, practically, we must fall short of some of its benefits. The distrust, which we have before spoken of, leads many to say, "This is a nurseryman's society, and the growing of fruit trees is their business; of course, all that makes demand for trees helps them; they will be sure to *find* such facts as they require to make a good market for trees." In this way confidence is destroyed. The fruit grower being persuaded that his interest is not consulted by the nurserymen, refuses to plant, and of course never reaps; leaves the society to those whom he supposes to be opposed to him, and the information he might have communicated and received is lost.

How strange it is that all men do not see that the welfare of all men is bound together, and that each man's true interest is promoted by the advancement of every other man's true interest. The welfare of a nurseryman depends entirely upon his consulting carefully the interests of his purchasers, the fruit growers; and failing to do this, he soon loses the confidence and the custom of those upon whom he depends for support.

Fruit growers and orchardists are seldom very skilful propagators of trees. They have found that division of labor is as profitable in this case as in any other; and that to raise a man's own trees, takes a long time, and would be as unprofitable as to make his own wagons, instead of purchasing of skilful mechanics. Very few of them have given, or can give, that attention to the study of pomology which will enable them to decide accurately as to the correctness of varieties which they wish to propagate, or gather and test so great a number of varieties as a man should, and can, who is engaged solely in supplying the public with trees.

The fact is, that our nurserymen now comprise the best informed class of men upon all the various subjects of fruit growing; and fruit growers would find it as much for their interest to obtain this knowledge, as it is for the interest of nurserymen that they should do so. It is equally necessary, in the attainment of the greatest good from this society, that men should be present and speak, who devote themselves especially to one or more branches of fruit culture. The results arrived at by small experiments, such as a nurseryman can make, are often contradicted and modified by those of an extensive planter; and this class of men usually exercise a very conservative influence in such a society.

Societies being comprised of individuals, it is plain that, however valuable the objects of the society may be, the results can not be very good unless there is individual effort. Various plans may be adopted, and great effort made to gather in the public, and by numbers secure money, and apparent prosperity. It must all be superficial and fictitious, unless there is steady and intelligent application of individuals in the direction of the objects proposed by its constitution. *Attention to fruit growing*, and the careful gathering of information throwing light upon this matter, is therefore the prime business of our members; and it is the duty of every member to see that, so far as he is concerned, he brings to the meeting his best information upon the subject proposed for discussion. It is only when our meetings are made valuable, and worth the trouble and expense of a journey, that we can in all honesty ask the farmer and the editor to leave his calling for a time, and hear and speak with us.

We are in favor of individual effort, and thus only can we prosper; but there is a degree of *individuality* which we can not always admire. We believe in every man's preserving his own identity, and not attempting to be somebody else. We are not in favor of any one's rights being compromised; but we are greatly in favor of courtesy in debate, brevity of speech, decorum, and the careful observance of customary parliamentary rules; for thus only can the rights of all be secured. In the absence of these, wordy and discursive debate soon assumes the whole field, and the true object of the meeting is lost.

We do not consider it a certain thing that popularity will follow merit, but we hope to see our society merit popularity, and shall aim at securing this desideratum through making the society useful to the public; and in the hope of doing something to satisfy the farmer and the orchardist that this society is really a valuable one to them, we have written these lines. H. E. H.

PLANTS FOR GRAPE BORDERS.

EDITORS GENESEE FARMER:—Your correspondent "Amateur," asks for information whether the Portulacca and Verbena can be grown on the grape border without material injury to the vines. We answer, they can if planted sufficiently distant to give the sun and air a chance to act on the soil.—None but plants of an annual nature should be employed, and those mentioned are as good as any. With these we would recommend a few patches of the Ice plant, (*Mesembryanthemum crystallinum*,) not for its flowers, however, but for its singularity, which generally finds admirers. About the best way to arrange these plants is to plant the Verbenas about five feet asunder each way, allowing them to occupy all the ground but the last row, which should be Portulacca and Ice plant alternate, eighteen inches apart. To give a striking effect to the Verbenas, and at the same time keep them from spreading too far, tie up a few of the main branches to sticks eighteen inches high. These, instead of forming a dwarf mass in the ordinary way, will then form bushes, which, if duly arranged as to colors, will give the border a very pretty effect. We have used Mignonette alternately with the Verbenas, taking care to keep them in compact bushes, with very good effect; and those who prefer, can plant that way. For a purpose like this, it is best to transplant the Portulacca from a seed bed, or at any rate to keep them quite trim, so that they may continue in blossom over a longer period of time. EDGAR SANDERS.

Chicago, Ill., Feb'y, 1858.

TRAINING OSAGE HEDGES—CORRECTION.

EDITORS GENESEE FARMER:—In the February number of your paper, you give an article on "Training Hedges," and refer to an article written by me for the *Rural Annual* of 1857; but in abridging the same for your columns, you have also abridged the time required for rearing the hedge, one year. This is a species of abridgement which is not safe, and I fear will result in the "inconsiderate hastiness" which you caution planters against.

The hedge should not be summer pruned the *second* year after planting, but allowed to make a full growth; and if well cultivated, it will make a growth of six or eight feet from the ground this season. The *third* summer, it should be summer pruned about the first of July, cutting back to within six inches of where it was cut in April.

I wish you would make this correction, because I know the Osage Orange will make a perfect defence against man or beast, if well trimmed; but care must be taken to give it breadth and density before height is attained. H. E. HOOKER.

Rochester, N. Y., Feb'y, 1858.

RASPBERRIES ON THE PRAIRIES.—These may be grown profitably, to almost any extent, by transplanting the wild bushes from the groves, which improves their quality and productiveness very much,—especially if well cultivated. Every new settler can have an abundance of this fruit the second year, if he will but try. G.—*Lee Centre, Ill., Jan'y, 1858.*

April Premiums.—Our friends who act as agents for the *Genesee Farmer*, are so disinterested in their efforts to disseminate agricultural information, that they seem to have overlooked altogether our "Large April Premiums." Few, if any, are competing for them. They seem to be satisfied with the consciousness of advancing the cause of rural improvement in their respective neighborhoods, without hoping for, or looking after, any pecuniary reward. Now, while this manifestation of their zeal for the cause, argues well for their public spirit,—while it makes us feel proud of such co-laborers,—yet, seeing that such Premiums are offered, and will be awarded and paid to some one, we desire that all who are desirous of a good Agricultural Library, should bear in mind, that they have only to make a very little effort in getting subscribers, and they are certain of it. We have never before offered so many Premiums—never was there so little competition—and there can be no doubt that an unusually small club will secure a Prize.

As we stereotype the *Farmer*, we can supply all orders for back numbers of the present volume. There are thousands of farmers that have given up the high-priced weeklies, on account of "hard-times," who do not at present take any agricultural paper. To such the *Genesee Farmer* particularly commends itself. It is the cheapest Agricultural Journal in the world. *More* Agricultural and Horticultural reading can be obtained in it, at *one-quarter* the price, than in the once popular weeklies. But three numbers are yet issued; and as they do not contain "news," &c., but information of permanent value, they are just as good now as ever. There is yet abundance of time to subscribe; and if our friends will only call the attention of their neighbors to the subject, they can greatly extend our subscription list. Every one who sees the paper is pleased with it. Its articles from experienced correspondents, in number, variety, and practical value, are unequalled. These articles in any single number, are worth the cost of the volume. Such a paper ought to have *one hundred thousand* subscribers, and by a little effort on the part of its numerous friends, it might have this number the present year. It is the "Farmers Own Paper," and every farmer should feel interested in extending its influence and usefulness. Its circulation is already greater than that of any other Agricultural paper in the world, but still we have no objection to entering the names of a few thousand more good farmers on our list.

The time for competition for the "Large April Premiums" expires on the 15th day of April. There are nine premiums, amounting to *one hundred and eighty dollars*, to be taken. The result will be announced in the May number. Now is the time to secure one of these premiums. Try and induce your neighbors to subscribe—they will never be sorry for it—and the prize is yours.

The postage on the *Farmer* is three cents a year in this State, and five cents a year in any other State.

Prize Essays.—We have the pleasure of presenting our readers, this month, Twenty-seven Prize Essays, written expressly for the *Genesee Farmer*. They merit, and we doubt not will receive, a careful perusal. On most of the subjects, quite a number of essays were received, nearly all of them well written, and worthy of publication, and we shall endeavor to make room for extracts from some of them, in a future number.

These essays have crowded out the favors of many valued correspondents, but they will appear next month. We have also on hand several hundred original domestic receipts, kindly furnished us by a number of excellent house-wives. We shall endeavor to publish, each month, such as are seasonable, and we hope our friends will continue to furnish them. We will give a *Rural Annual*, or any other book of the value of twenty-five cents, for any dozen domestic receipts, which the Committee deem worthy of publication.

New York State Agricultural Society.—The Annual Meeting of the New York State Agricultural Society, was held at Albany, Feb. 10th, 11th. The following officers were elected for the coming year:

President—Hon. W. T. McCoun, of Queens County.
Corresponding Secretary—B. P. Johnson, of Albany.
Recording Secretary—E. Corning, Jr. Albany.
Treasurer—Luther H. Tucker, Albany.

It was decided to hold the next Annual Fair at Syracuse, October 5—8.

Inquiries and Answers.

Top Grafting Young Trees—The Willow for Hedges.—(P. E. W., Bronte, C. W.) It will be quite practicable to graft your young apple trees, in the spring, with any other varieties you may choose; the *Jersey Sweet* and *Northern Spy* will both be found valuable stocks for that purpose, as they are strong, thrifty growers.

The value of the willow for hedges and screens is little appreciated. It is such a rapid growing plant, and may so easily be made to become bushy and impenetrable by the wind, that it is of the very first importance for this purpose. Especially may it be employed to advantage about gardens. The variety *purpurea*, or Purple Willow, is one of the best for this use, and is very commonly grown in this manner in England. The leaves and bark are so very bitter, that no animal will gnaw or brouse it; it makes shoots from three to five feet in length; and, in four or five years, a screen can be formed from fifteen to twenty-five feet high, which will be a complete wind-breaker. Cuttings may be planted about a foot apart, where it is designed they should permanently stand, taking care, if any should fail, to replace them the next season. It will be best, the first three or four years, to cut the shoots back half their length, to make them bushy. Plants and cuttings may be obtained, in this vicinity, of the nurserymen.

Pipes for Carrying Water.—(M. G., Miamisville, O.)—The best method of carrying water from springs and wells with which we are acquainted, is through wooden tubes on the same principle as the old fashioned pump logs, but made of pine scantling. It is manufactured by I. S. Hobbie & Co., of this city, and by Gould & Allen of Quincy, Ill. It is cheaper than lead, less liable to fill up, and quite as easily laid down.

GUANO FOR ONIONS.—(A Young Farmer, Toronto, C.W.) —Peruvian guano is an excellent manure for onions. About three pounds to the square rod is the proper quantity, sown broadcast and raked in previous to sowing the seed. We have raised excellent crops in this way. Guano stimulates the early growth of the plant, and has also the advantage of being free from weeds. If the soil is very poor, four pounds to the square rod may be used; but there is danger of applying an excess, as it causes the onions to run too much to tops.

WHEAT TURNING TO CHESS.—(R., Port Ryerson, C. W.) —The phenomenon you mention is not new. Our correspondents have several times sent us an ear of wheat with an ear of chess apparently growing from it; but on careful examination it was found that the stalk of the chess was only twisted around the ear of wheat, and not attached to it. We have no doubt that, had you examined, you would have found such to be the case in the precisely similar phenomenon you describe.

UNDERDRAINING.—I wish to obtain a knowledge of the best method of underdraining. I discover that thou hast an article in the first number on this subject. It speaks of the value of underdraining, but not so extensively of the manner in which it should be performed. And I suppose that I will expose my ignorance, by saying that I do not fully understand all that is written in that article on the subject. The two-inch pipe tiling, I do not fully understand—what it is, nor how it is to be placed in the ditch? Underdraining is a subject that I feel very desirous to understand, and have for a considerable length of time. I do not wish to become troublesome to thee on the subject, but it would gratify me, if it suits thy inclination and convenience, to give a more practical account of the best method of doing the work. LOT LINDLEY.—*Sylvania, Ind.*

Our article in the February number, may furnish an answer to a portion of the above, but we should be glad if some of our experienced correspondents would give additional information.

CATERPILLARS ON FRUIT TREES.—What is the best means of destroying the Caterpillar (and other mischievious worms) on our fruit and shade trees? They have been very destructive in this region, during the past season. I make the inquiry for several reasons. One is that you may bring the subject before your readers, to ascertain, if possible, some more sure and effectual way of exterminating the race, than fireing charges of powder among the nests, or of burning them with torches, &c. I succeeded in destroying about 150 nests of the kind which make their appearance quite early, (I cannot give the species,) by using a composition of oil and camphine, applied with a torch to the nest. It being my first and only experience, I am anxious to know if there is a better way. A neighbor of mine expended considerable time and money, in fireing charges of powder into them, but in a few days they were as thick as ever. P. T.—*Broome Co., N. Y.*

WIRE FOR GRAPE TRELLISES.—As it is now generally admitted that wire trellises are the best and most economical for grape vines, will you oblige by informing me whether common No. 8 or 9 wire will do, or whether it must be galvanized wire? What would the cost of the wire be, and how much would it take to trellis an acre of grape vines, the rows being 12 feet apart, and the vines 12 feet apart in the rows? HENRY LAMPMAN.—*Drummondville, C. W.*

CHIP MANURE.—Being a "green one" in agricultural pursuits, I wish to ask, through your valuable paper, how chip manure may be disposed of to the best advantage? Is it good for anything as a fertilizer? and if so, to what; and how applied to advantage? P. T.—*Broome Co., N.Y.*

GAME FOWLS.—I wish to know where I can obtain a pair of Game fowls, and what they would cost delivered at the Tunkhannock Depot, Pa. J. DAYTON.

BLIGHT ON ONIONS.—I would like to know the cause of blight on Onions. Last season, when I gathered mine, one-fourth were entirely rotten. The ground was new, this being the second crop. C. CARMICHAEL.—*Monee, Ill.*

SPRING FLOWERING SHRUBS.—Will some one of your numerous correspondents inform me, as to the best six species or varieties of Spring Flowering Shrubs, suitable for a small lawn or flower garden? WM. THOMAS.

BUTTERFLY DRAG.—Will some of your correspondents give a description of the butterfly drag? I wish to get a drag made, and should be glad of some hints on the subject. C. E. KELLY.—*Peru, Ind.*

New Advertisements this Month.

Rural Affairs.—Luther Tucker & Son, Albany, N. Y.

Ornamental Trees and Plants for Spring of 1858.—Ellwanger & Barry, Rochester, N. Y.

The United States Journal.—J. M. Emerson & Co., 371 Broadway, New York.

To Fruit Growers; Spring of 1858.—Ellwanger & Barry, Rochester, N. Y.

Cranberry Culture.—Sullivan Bates & Co., Bellingham, Norfolk Co., Mass.

Chinese Sugar Cane Seed.—W. T. Goldsmith, Rochester, N. Y.

Newman's Thornless Blackberry.—A. A. Bensel, Milton, Ulster Co., N. Y.

Agricultural Implements.—A. Longett, 34 Cliff st., N. Y.

Fine Hardy Border Plants.—Ellwanger & Barry, Rochester, N.Y.

Grapes, Blackberries, Raspberries, Strawberries, Currants, Pear Stocks, &c., &c.—Wm. R. Prince, & Co., Flushing, N. Y.

Rare Evergreen Trees; of California, &c.—Ellwanger & Barry, Rochester, N. Y.

The Farmer's Practical Horse Farriery.—E. Nash, publisher Auburn, N. Y.

Roses and Dahlias, &c., &c.—Ellwanger & Barry, Rochester, N.Y.

Seeds of Rare and Popular Hardy Trees and Shrubs.—Thomas Meehan, Germantown, Pa., (near Philadelphia.)

Flax Seed.—M. F. Reynolds, Rochester, N. Y.

Grace Greenwood's Little Pilgrim.—Leander K. Lippincott, Philadelphia, Pa.

ADVERTISEMENTS,

To secure insertion in the FARMER, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to farmers. TERMS—Two Dollars for every hundred words, each insertion, PAID IN ADVANCE.

MORGAN HORSE FOR SALE.

FOR SALE, in whole or in part, or in exchange for western land, a Morgan Horse (entire) of fine figure and action, seven years old. J. DORR,
February, 1858.—3t Scottsville, Monroe Co., N. Y.

ROSES AND DAHLIAS.

HYBRID PERPETUAL ROSES.
MOSS ROSES.
HYBRID CHINA ROSES.
And other classes, a large stock of strong plants.

DAHLIAS, a superb collection embracing the finest new English and French varieties. The stock of the above is large, and will be sold at very low rates.

Descriptive priced Catalogues forwarded gratis to all who enclose one stamp. ELLWANGER & BARRY,
March, 1858.—1t. Mount Hope Nurseries, Rochester, N. Y.

JUST PUBLISHED, A BOOK FOR EVERY FARMER.

THE FARMER'S PRACTICAL HORSE FARRIERY;

CONTAINING practical rules on Buying, Breeding, Breaking, Vicious Habits, Management, Lameness, Prevention, Symptoms, Treatment and Cure of Diseases; also, The Great Secret of Taming and Training Horses, and the largest collection of Valuable Receipts ever yet published, to which is prefixed an account of the Breeds in the United States, with numerous Illustrations. 12mo., 198 pages, bound in muslin. Price, 50 cents. Sent to any address on receipt of price. Address, E. NASH, Publisher, Auburn, N.Y.

Agents wanted in every County. Agents are earning from $1 to $4 per day, in selling this book, in these hard times.

ORNAMENTAL TREES AND PLANTS FOR SPRING OF 1858.

EVERGREEN, DECIDUOUS, WEEPING, &c., &c.

ELLWANGER & BARRY, Rochester, N. Y., beg to inform Nurserymen, Landscape Gardeners, and Planters generally, that their Stock of the following articles is large, and will be sold at prices to suit the times.

1st—EVERGREENS.

NORWAY SPRUCE, of various sizes from one to six feet high, well formed specimens, in quantities from one dozen to 100,000.

PINES, Austrian, Scotch, and White or Weymouth, from 8 to 12 inches—frequently transplanted.

ARBOR VITÆ, Siberian, 2 to 3 feet; this is a beautiful, hardy tree.

" " American, 1½ to 4 feet, for hedges, screens, &c.

PINSAPO SPRUCE, 12 to 18 inches high, quite broad and stout—a fine, rare tree.

AFRICAN OR SILVER CEDAR, 2 to 3 feet high. This is a noble tree, resembling the *Cedar of Lebanon*, but hardier and of more rapid growth.

JAPAN CEDAR, (Cryptomeria Japonica,) 3 to 4 feet high, (in pots,) not quite hardy at Rochester.

CHILI PINE, (Araucaria Imbricata,) 12 to 18 inches, stout and bushy, (in pots,) not quite hardy at Rochester.

Besides these we can furnish a great number of others, for which we refer to Descriptive Catalogue No. 2.

☞ See also advertisement of California Evergreens.

2d—DECIDUOUS TREES.

Scotch Elm, 8 to 10 feet,	Snowy Mespilus,
Huntingdon Elm, 8 to 10 feet,	Profuse flowering do. grafted 4 to
Tulip tree, 8 feet,	5 feet high—a fine small lawn tree
Magnolia acuminata, 4 to 5 feet.	Rosemary leaved Willow, 5 feet,
Purple leaved Maple, 4 to 5 feet.	grafted—a beautiful feathery tree
Gold striped leaved do. 4 to 5 ft.	

3d.—WEEPING OR DROOPING TREES.

We have the pleasure of offering a fine stock of the following graceful trees so desirable for lawns, cemeteries, &c.:

Weeping European Ash,	Weeping European Birch,
Weeping Lentiscus leaved Ash,	Weeping American Willow,
Weeping Mountain Ash,	Weeping Kilmarnock Willow,
Weeping Poplar,	Weeping Cherry, ever blooming,
Weeping Linden,	Weeping Heart Cherry.

The above will be supplied in quantities to suit purchasers. Priced Catalogues sent GRATIS to those who enclose one stamp.

ELLWANGER & BARRY,
March, 1858.—1t. Mount Hope Nurseries, Rochester, N.Y.

WM. R. PRINCE & CO., FLUSHING, N. Y.

GRAPES.—Isabella and Catawba, 1 year, $10 per 100; 2 years, $18; 3 years, $30. Clinton, 2 years, $25. Cuttings at low rates. Also, all the New Grapes.

BLACKBERRIES.—New Rochelle and Dorchester, $10 per 100, $2 per doz. Imperial, (finest of all,) $11 per 100, $2.50 per dozen. Newman's Thornless, $2 per doz. These were transplanted last spring, and not mere suckers.

RASPBERRIES.—Orange, Yellow Prolific, and Franconia, $1.25 per dozen. Everbearing and Red Prolific, $1. Large Monthly, Cushing, and many others, $1.50. Red Antwerp and Red Cane, $4 per 100, $35 per 1,000. Catawissa, $4 per dozen.

STRAWBERRIES.—12 fine varieties, selected from an unrivalled collection, $1 per 100, $5 to $8 per 1,000.

CURRANTS.—Fine varieties, $1.50 to $2 per doz., $10 per 100.

PEAR STOCKS.—1 year, $8 per 1,000; 2 years, $14; also stocks of Cherry, Mahaleb, Plum, Peach, Apple, Paradise, Doucin, Angers, Quince, &c.

HEDGES.—Osage Orange, Hawthorn, Honey Locust, American and Siberian Arbor Vitæ, Hemlock, Privet, &c.

SEEDS.—Pear, (very fine,) $4 per lb. Apple, Plum, Cherry, Mahaleb, Quince, Yellow and Honey Locust. Osage Orange, and all Evergreen and other Tree Seeds. White Clover Seed, Onion, Lettuce, and *Chinese Sugar Cane* in quantity.

PEAR TREES.—Standards, 5 to 9 years, grafted, of bearing age.

DWARF PEARS.—4 to 8 years, covered with fruit buds.

CHERRIES.—Standards and Dwarfs, large for prompt bearing.

RHUBARB.—Linnæus, Victoria, Mammoth, Colossal, and all the new varieties at low rates per 100 or 1,000.

CRANBERRIES.—Bell and other varieties, at low rates.

Ornamental Trees, Flowering Shrubs, Bulbous and Tuberous rooted Plants, Green House Plants, &c., of every class.

Chinese Potato tubers $6 per 100. Roots $30 for 10 lbs.

N. B.—All the newest varieties of Fruit and other Trees, &c., will be found in the Catalogues of the different departments, sent gratis to applicants. March, 1t.

ROCHESTER CENTRAL NURSERIES.

Send for a Catalogue.

CHINESE SUGAR CANE SEED.—A package of this Seed, containing enough to plant half an acre of land, with plain directions for planting, cultivating, harvesting, and after treatment of the Cane, will be sent, postage paid, on the receipt of *One Dollar*. Address C. W. SEELYE,
February, 1858.—4t Rochester, N. Y.

J. DONNELLAN & CO.,

OF THE

ROCHESTER AND LAKE AVENUE COMMERCIAL NURSERIES,

ROCHESTER, N. Y.,

WISH to inform their friends and customers that they have on hand for Spring Sales the following select assortment of

Standard and Dwarf Fruit Trees,
Evergreen and Weeping "
Ornamental Deciduous and Climbing Shrubs,
A numerous variety of select French and Domestic Roses, Pæonies, Phloxes, &c. &c.,
Hardy Herbaceous and Hedge Plants,
Bulbous Roots, Double Dahlias, &c., &c.,

which they will sell in quantities to suit purchasers, and on moderate terms.

100,000	3 and 4 year old Apple Trees, choicest kinds,					
140 000	2	"	"	"	"	"
130 000	1	"	"	"	"	"
10,000	2	"	Peach	"	"	"
10,000	1	"	"	"	"	"

with an average quantity of Pears Plums, Cherries, &c.

We have also 100,000 Manetti Stocks for Roses, first quality,
5,000 1 and 2 year old Horse Chestnut Seedlings,
100,000 assorted Apple Scions, from the most approved kinds.

☞ Descriptive and Price Catalogues furnished gratis.
Rochester and Lake Avenue Com'l Nurseries, Feb. 1, 1858.—3.

FINE HARDY BORDER PLANTS.

PHLOXES, 160 of the most beautiful varieties.

CHRYSANTHEMUMS, 70 of the finest pompone varieties and 25 of the large. We give special attention to these—importing annually the best new varieties from abroad.

HOLLYHOCKS, superb double varieties, of all colors, perfect as dahlias.

DIELYTRA SPECTABILIS—This plant proves to be as hardy as a common Pæony, and is one of the most remarkable and beautiful of all border plants. Over 10,000 strong plants for sale.

Besides the above, we can supply over 200 other choice perennial border plants, selected with great care and discrimination.

ELLWANGER & BARRY,
March, 1858.—1t. Mount Hope Nurseries, Rochester, N.Y.

AGRICULTURAL IMPLEMENTS.

A CONSIGNMENT of Agricultural Implements from an extensive manufactory, is now offered for sale at prices 20 per cent. below the printed rates of the Agricultural Warehouses. Consisting of Plows, Corn-Shellers, Fanning Mills, Straw and Hay Cutters, Vegetable Cutters, Corn Mills, Churns, Cultivators, Horse Hoes, Road Scoops, Garden Barrows, &c., &c. A pamphlet giving description and prices, will be sent (free) on applying to the agent,

A. LONGETT,
March, 2t. 34 Cliff street, New York.

HAMILTON NURSERIES, C. W.

IN ADDITION to a large assortment of *young* Nursery Stock, we offer, at low prices for cash or short approved credit,

125,000 First class Apple Trees, four years old;
12,000 Plum Trees, two and three years; *very fine.*
5,000 Cherry Trees;

And all the Small Fruits. E. KELLY & CO.,
January, 1858.—2t* Hamilton, C. W.

PEAR SEEDS AND SEEDLINGS.

GOOD, healthy Pear Seedlings, 1 year, $8 per 1,000, $75 per 10,000: 2 years, $15 per 1,000, $140 per 10,000.

New England Pear Seeds in prime order for spring sowing, $5 per quart. Apple, Mazzard, Plum, Angers Quince, Mahaleb, Paradise, and Doucain Stocks, of the best quality. Catalogues to any address. Carriage paid to New York or Boston.

B. M. WATSON, Old Colony Nurseries,
February, 1858.—3t Plymouth, Mass.

NEWMAN'S THORNELESS BLACKBERRY.

MRS. NEWMAN has a good stock of plants of this valuable variety, which I will send out this spring, by Express or otherwise, for $4 per dozen; $18 per hundred. For full description send for Circular. Address,

A. A. BENSEL,
Milton, Ulster Co., N. Y.

☞ True Hudson River Antwerp Raspberry plants for sale by the thousand. March, 2t*

A. LONGETT,

No. 34 CLIFF STREET, NEW YORK,

DEALER in Peruvian, Colombian and Mexican Guano, Superphosphate of Lime, and Bone Dust.
November 1, 1857.—1y.

CHINESE SUGAR CANE SEED—at purchasers' expense—at 15 cents per pound.
100,000 1 year old Asparagus, $2.50 per thousand.
2,000 1 year old Red Dutch Currants, $20.00 per thousand.
Address, W. T. GOLDSMITH, Rochester, N. Y. March, 2.

SEEDS! SEEDS! SEEDS!

THORBURN'S NEW DESCRIPTIVE CATALOGUE OF VEGETABLE, FIELD, AND FRUIT SEEDS, FOR 1858, with directions for cultivating vegetables, is now ready, and will be sent to applicants enclosing a three cent stamp.

The subscribers offer, of the growth of 1857, and of the very finest qualities, their usual extensive assortment of SEEDS, comprising many *novelties* and every tested desirable variety known in the several departments of

VEGETABLE, FIELD, FLOWER, TREE, AND FRUIT SEEDS.

They would particularly call the attention of cultivators and amateurs to the following

Choice Peas.

EXTRA EARLY DANIEL O'ROURKE—The earliest known.
" " SANGSTER'S No. 1—A great favorite.
" " TOM THUMB—Very fine growing, but 8 inches high.
EARLY SEBASTOPOL.—New and good.
CHAMPION OF ENGLAND—One of the very best.
DWARF AND TALL SUGAR—Edible pods.
HAIR'S DWARF MAMMOTH—Superb.
HARRISON'S GLORY AND PERFECTION—New and very productive.
NAPOLEON AND EUGENIE—Both new and early, wrinkled.
EPPS' LORD RAGLAN—New and superb.
EPPS' MONARCH— " "
CARTER'S VICTORIA—Fine, wrinkled.
BRITISH QUEEN—One of the best late.

With thirty other standard sorts, for which see catalogue.

ALSO,

EARLY PARIS, NONPARIEL, and LENORMAND'S CAULIFLOWER;
EARLY WAKEFIELD, OX-HEART, and WINNINGSTADT CABBAGE;
EARLY and GIANT WHITE and RED SOLID CELERY;
PRIZE CUCUMBERS, for frames;
EARLY TOMATOES;
SWEET SPANISH AND BULL-NOSE PEPPER;
EARLY CURLED LETTUCE;
EARLY CURLED PARSLEY;
EXTRA EARLY TURNIP BEET;
EARLY WHITE VIENNA KOHL-RABI;
WINTER CHERRY or STRAWBERRY TOMATO;
APPLE AND PEAR SEEDS;
MAHALEB CHERRY PITS;
HAVANA TOBACCO SEED;
DIOSCOREA BATATAS or CHINESE POTATO;

With thousands of other SEEDS of the same superior qualities as have heretofore afforded such universal satisfaction, and which can be recommended with the fullest confidence as unsurpassed for genuineness.

AFRICAN IMPHEE—genuine, as raised by Mr. L. Wray; $1 per lb.
SORGHUM, or CHINESE SUGAR CANE; 25 cts. per lb.

Flower Seeds.

The collection this season is unusually large and choice, embracing many novelties.

Orders by mail will have immediate attention.

J. M. THORBURN & CO.,
February, 1858—3t 15 John street, New York.

TO FRUIT GROWERS.—SPRING OF 1858.

IN ADDITION to our general stock of Fruit Trees, we solicit the attention of Planters to the following articles in particular, the stock of which is extensive, and of the finest descriptions:

PEARS ON QUINCE, *Dwarfs and Pyramids*, 2 to 3 years' growth; Trees of bearing size can be supplied of a few sorts.

CHERRIES ON MAHALEB, *Dwarfs and Pyramids*, very strong and well formed, all the best sorts in cultivation.

FOREIGN GRAPES for Vineries—strong, 2 year old plants, in pots, from eyes; all the popular varieties.

STRAWBERRIES, upwards of 40 varieties, including McAvoy's superior, Longworth's Prolific, Hooker's Seedling, Genesee, Jenny Lind, Scott's Seedling, &c.; also, the finest French and English varieties, including *Trollope's Victoria*, and *Triomphe de Gand*, two superb, hardy and prolific varieties.

RASPBERRIES—*Brinkle's Orange*, the hardiest and best light colored variety known; also, *Merveille de 4 Saisons* and *Belle de Fontenay*, the two best autumnal sorts, superb large fruits and prolific.

All these fruits have been propagated and grown, with the most scrupulous regard for accuracy, and may be relied upon. Early orders solicited.

ELLWANGER & BARRY,
March, 1858.—1t. Mount Hope Nurseries, Rochester, N.Y.

CRANBERRY CULTURE.

THE subscribers have issued a Circular on the Cranberry and its Culture. They will forward Circulars, free of charge, to all applications. Also will send plants in a fresh state, by express, to all parts of the United States. Price, $5 per 1,000. Address,

SULLIVAN BATES, & CO.,
March, 3t. Bellingham, Norfolk Co., Mass.

NOVEL AND EXTRAORDINARY!

PREMIUMS IN GOLD!!
PREMIUMS IN BOOKS!!
PREMIUMS IN ENGRAVINGS!!

THE UNITED STATES JOURNAL.

A PICTORIAL MONTHLY,

COMBINING THE FEATURES OF A

NEWSPAPER AND MAGAZINE.

THIS popular monthly is now in its ninth year, and is one of the largest papers in the world, each number containing sixty-four spacious columns, nearly eight hundred during the year, and embracing as much interesting matter as the ordinary three-dollar magazines.

It is ably edited, profusely illustrated, and is printed on beautiful calendered paper, each number forming of itself a splendid mammoth Pictorial. Its price is but FIFTY CENTS a year, and Postage *Six Cents* a year.

THE GREAT PREMIUM OFFERS!!

FIRST. To any person sending us one subscription (50 cents) we will present a superb GOLD RING, or [illegible] elegant GOLD-PLATED BREASTPIN, set with stone or imitation pearl—either of which retails at several times the amount of subscription, or a choice of the 50 cent books in our catalogue of five hundred volumes.

SECOND. To any person sending us two subscriptions ($1) we will present either a splendid DOLLAR BOOK of his own selection from a Catalogue of several hundred of the most popular works of the day, or his choice of twelve magnificent *Steel Plate Engravings*, among which are "The Signing of the Death Warrant of Lady Jand Grey," "The Capture of Major Andre," &c., or, if he prefers, an elegant set of gold studs, or gold sleeve-buttons, or a superb gold breast-pin for lady or gentleman, set with gold, stone, or some other golden gift of equal value of his own selection from our schedules.

Larger Clubs secure premiums equally liberal in proportion.—Do you want a SPLENDID LIBRARY, a set of RARE ENGRAVINGS, a GOLD WATCH, GOLD CHAIN, GOLD LOCKET, GOLD PENCIL, or any other RICH JEWELRY, you can easily secure it by forming a club for this Journal. Its established reputation and marvelous cheapness will enable you to form a large club with little effort.

Reader, send one or two subscriptions at once and thus secure some specimens of the paper and premiums, and be the first in the field to form a club. Should you select a golden premium, send 3 cents extra to pre-pay postage, and you will receive it by return of mail.

A specimen copy of the Journal, containing full particulars of our programme of premiums will be forwarded gratuitously if desired, and those who would like to satisfy themselves that the above offers will be faithfully carried out, can do so by sending for a specimen.

GETTING RICH.

We invite every lady or gentleman, desiring a pleasant money-making occupation, to apply for an agency for the above Journal, and the American Portrait Gallery, the most superb subscription-book ever issued in this country. We will refer them to some of our agents, now in the field, whose profits in the business, during the year 1857, have amounted to over *Five Thousand Dollars*.—An agent wanted in every County not already taken.

J. M. EMERSON & CO.,
March, 1858.—1t 371 Broadway, New York.

THREE HUNDRED AND THIRTY-SIX PAGES, AND FOUR HUNDRED AND FORTY ENGRAVINGS.

RURAL AFFAIRS.

A COMPLETE ENCYCLOPEDIA in miniature for every man with a Farm, a Garden, or a Domestic Animal—for every place which will grow a flower or a Fruit-tree—for every Purchaser or a builder in the country, and for every household in the city, delighting in representations or looking forward with hopes of Rural Life. Embracing

RURAL ARCHITECTURE,	IMPLEMENTS AND MACHINERY,
LANDSCAPE GARDENING,	FARM ECONOMY,
FRUIT CULTURE,	DOMESTIC ANIMALS,
ORNAMENTAL PLANTING,	FARM BUILDINGS,
BEST FRUITS AND FLOWERS,	HINTS FOR CULTIVATORS.

BEAUTIFULLY ILLUSTRATED WITH 440 ENGRAVINGS

By JOHN J. THOMAS, Author of the "American Fruit Culturist," &c., &c. Sent, post-paid, on receipt of $1 in Gold, Postage Stamps or Bank-note, by the publishers,

LUTHER TUCKER & SON,
Albany, New-York.

*** The same publishers have just issued THE ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS FOR 1858—a beautiful annual of all Agricultural and Horticultural matters · with 180 engravings. Price 25 cents. For the sake of introducing it more widely in every locality, they will send one dozen copies, post-paid for TWO DOLLARS!

☞ AGENTS WANTED to sell the above works in all parts of the country. March, 1858.—3t.

Prices of Agricultural Products at the Principal Markets in the United States, Canada and England.

	NEW YORK, Feb. 23d.		PHILADELPHIA, Feb. 23d.		ROCHESTER, Feb. 23d.		CHICAGO, Feb. 23d.		TORONTO, Feb. 22d.		LONDON, ENG., Feb. 1st.	
Beef, per 100 lbs.,					$4.50 @	$6.00			$3.00 @	$5.25	$8.25 @	$15.00
do mess, per bbl.,	$9.00 @	$10.00					$8.00 @	$9.00				
Pork, per 100 lbs.,	6.50	7.50	$7.50 @	$8.00	5.00	6.00			5.25	6.00	10.50	15.00
do mess, per bbl.,	16.00	17.00	16.00	17.00	17.00		14.00	14.50	12.00	12.75		
Lard, per lb.,	.09	.10	.09	.10½	.09½	.10	.08	.08½			.18	.17
Butter, do	.11½	.22	.11	.20	.14	.16	.10	.18	.15	.21	.19	.22
Cheese, do	.06½	.08½			.06	.08	.09½	.11			.22	.16
Flour, per bbl.,	4.30	7.00	4.87	5.75	4.00	5.00	3.00	4.50	3.50	4.25	6.25	
Wheat, per bush.,	1.00	1.42½	.95	1.30	.70	1.00	.54	.90	.70	1.00	1.20	1.50
Corn, shelled, per bu.,	.65	.70	.57	.62	.50	.54	.35	.40			1.02	1.08
Rye, do	.69	.73	.70		.47	.50	.50		.55	.60	.90	1.08
Oats, do	.34	.47	.33	.35	.30	.34	.23	.25	.27	.30	.57	.58
Barley, do	.70	.75			.44	.50	.25	.45	.40	.55	.78	1.20
Clover Seed, do	4.80	5.50	4.25	4.75	4.00	4.50	4.25	4.50				
Timothy Seed, do	1.75	2.25	2.00	2.50	2.00	2.75	1.50	1.62½				
Flax Seed, do	1.25	1.45	1.30				.80				1.74	1.86
Hay, per [illegible]	13.00	15.00			6.00	9.00	8.50	7.00	8.00	16.00		
Wool, p[illegible]	.26	.45			.20	.30			.15		.26	.33
Wood, hard, per cord,					4.50	5.50	5.50	6.00	4.00	4.50		

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